

Service Manual

Cassette Deck

RS-M88
 (Black Face)
 (Silver Face)

Quartz-Locked Direct-Drive Cassette Deck
 with Metal Tape Recording Capability



This is the Service Manual for the following areas.
 For All European areas except United Kingdom.
 For United Kingdom.

**Professional Series****RS-M85 MECHANISM SERIES****Specifications**

Track system: 4-track 2-channel stereo recording and playback
 Tape speed: 4.8 cm/s
 Wow and flutter: 0.035% (WRMS), $\pm 0.10\%$ (DIN)
 Frequency response: Metal tape;
 20—20,000 Hz
 30—18,000 Hz (DIN)
 30—17,000 Hz $\pm 3\text{dB}$
 (0 VU) 40—13,000 Hz $\pm 3\text{dB}$
 CrO₂/Fe-Cr tape;
 20—18,000 Hz
 30—18,000 Hz (DIN)
 30—16,000 Hz $\pm 3\text{dB}$
 Normal tape;
 20—16,000 Hz
 30—16,000 Hz (DIN)
 30—14,000 Hz $\pm 3\text{dB}$
 Signal-to-noise ratio: Dolby* NR in; 69 dB (above 5 kHz)
 Dolby NR out; 59 dB (signal level = max. recording level, Fe-Cr/CrO₂ type tape)
 Fast forward and
 rewind time: Approx. 80 seconds with C-60 cassette tape
 Inputs:
 MIC; sensitivity 0.25 mV, applicable microphone
 impedance 400 Ω —10 k Ω
 LINE; sensitivity 60 mV, input impedance 68 k Ω

Outputs:
 LINE; output level 700 mV, load impedance
 22 k Ω over
 HEADPHONE; output level 140 mV, load
 impedance 8 Ω
 Rec/PB connection: 5P DIN type; input sensitivity 0.25 mV,
 impedance 4 k Ω
 output level 700 mV, impedance 1.5 k Ω
 Bias frequency: 85 kHz
 Motors:
 Capstan; 1-quartz control phase-locked DC
 brushless direct-drive motor
 Reel table; 1-DC coreless motor
 Heads:
 2-head system
 1-SX (Sendust Extra) head for rec/playback
 1-sendust/ferrite double-gap head for erasure
 Power requirements: AC; 110/125/220/240V, 50-60 Hz
 Preset power voltage; 240V only for England.
 Power consumption: 35 W
 Dimensions: 9.7 cm(H) \times 45.0 cm(W) \times 40.3 cm(D)
 Weight: 10.5 kg

Specifications are subject to change without notice.

* 'Dolby' and the double-D symbol are trademarks of Dolby Laboratories.

Technics

Matsushita Electric Trading Co., Ltd.
 P.O. Box 288, Central Osaka Japan

LOCATION OF CONTROLS AND COMPONENTS

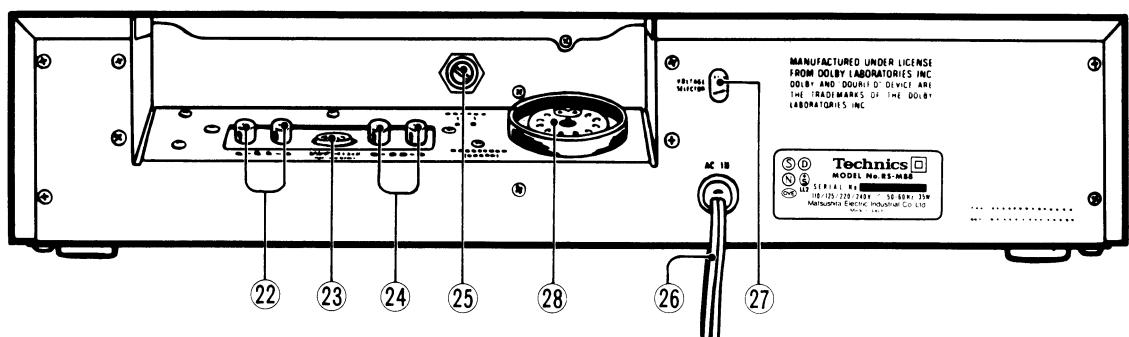
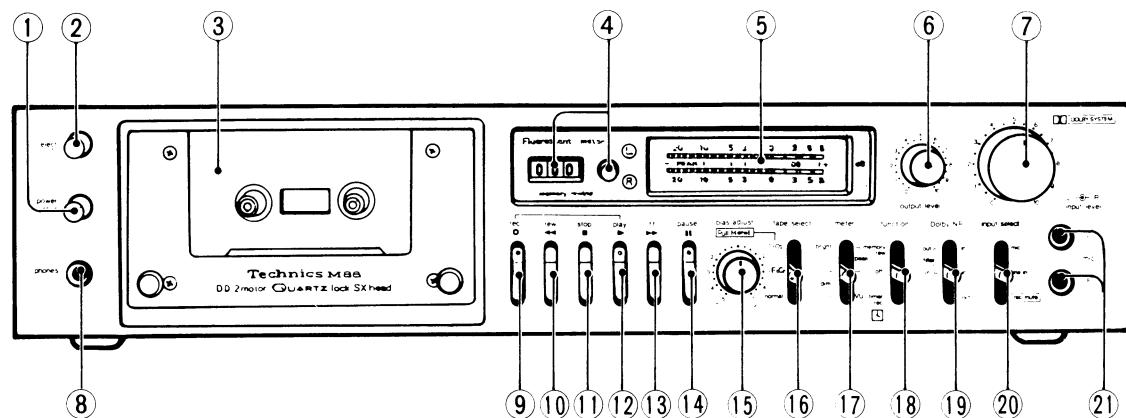


Fig. 1

| | |
|---|--|
| ① Power Switch (power) | ⑯ Tape Selector (tape select) |
| ② Eject Button (eject) | ⑰ Meter-Brightness/Function Selector (meter) |
| ③ Cassette Holder | ⑱ Function Selector (function) |
| ④ Tape Counter, Reset Button | ⑲ Dolby Noise-Reduction Switch (Dolby NR) |
| ⑤ FL (Fluorescent Level) Meters | ⑳ Input Selector (input select) |
| ⑥ Output Level Control (output level) | ㉑ Microphone Jacks (mic) |
| ⑦ Input Level Controls (input level) | ㉒ Line Output Jacks (LINE OUT) (R, L) |
| ⑧ Headphones Jack (phones) | ㉓ Record/Playback Connection Socket (REC/PB) |
| ⑨ Record Button with Record Indication Lamp (record) (○) | ㉔ Line input Jacks (LINE IN) (R, L) |
| ⑩ Rewind Button (rewind) (◀◀) | ㉕ Meter-Brightness-Adjustment Control (meter light) |
| ⑪ Stop Button (stop) (■) | ㉖ Power Cord |
| ⑫ Playback Button with Playback Indication Lamp (play) (▶) | ㉗ Voltage Selector (VOLTAGE SELECTOR) |
| ⑬ Fast-Forward Button (ff) (▶▶) | ㉘ Remote-Control Connector (REMOTE CONTROL) |
| ⑭ Pause Button with Pause Indication Lamp (pause) (II) | |
| ⑮ Bias-Adjustment Control/“Metal tape” selector (bias adjust) (pull Metal) | |

DISASSEMBLY INSTRUCTIONS

*The head azimuth can be adjusted by removing the cassette lid.

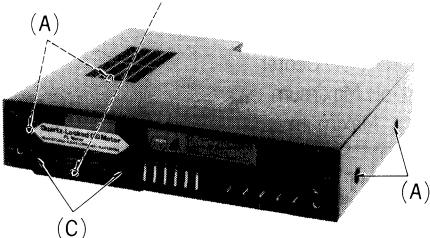


Fig. 2

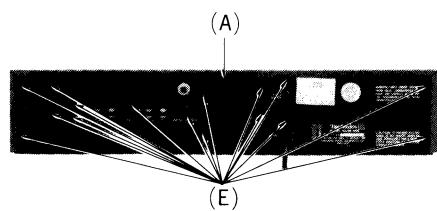


Fig. 3

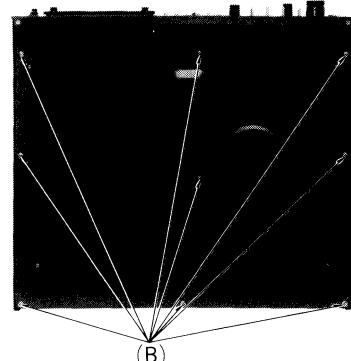


Fig. 4

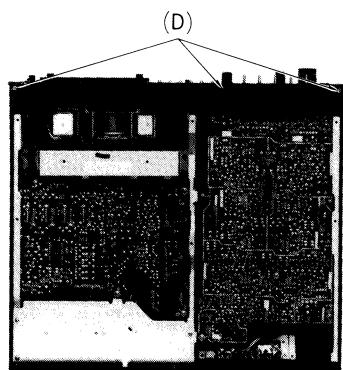


Fig. 5

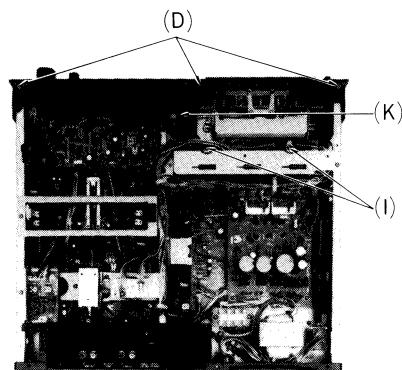


Fig. 6

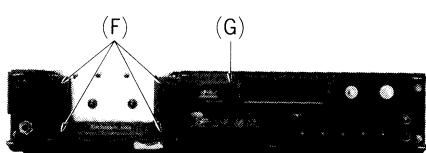


Fig. 7

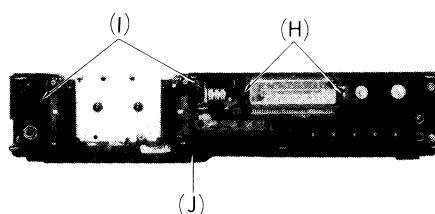
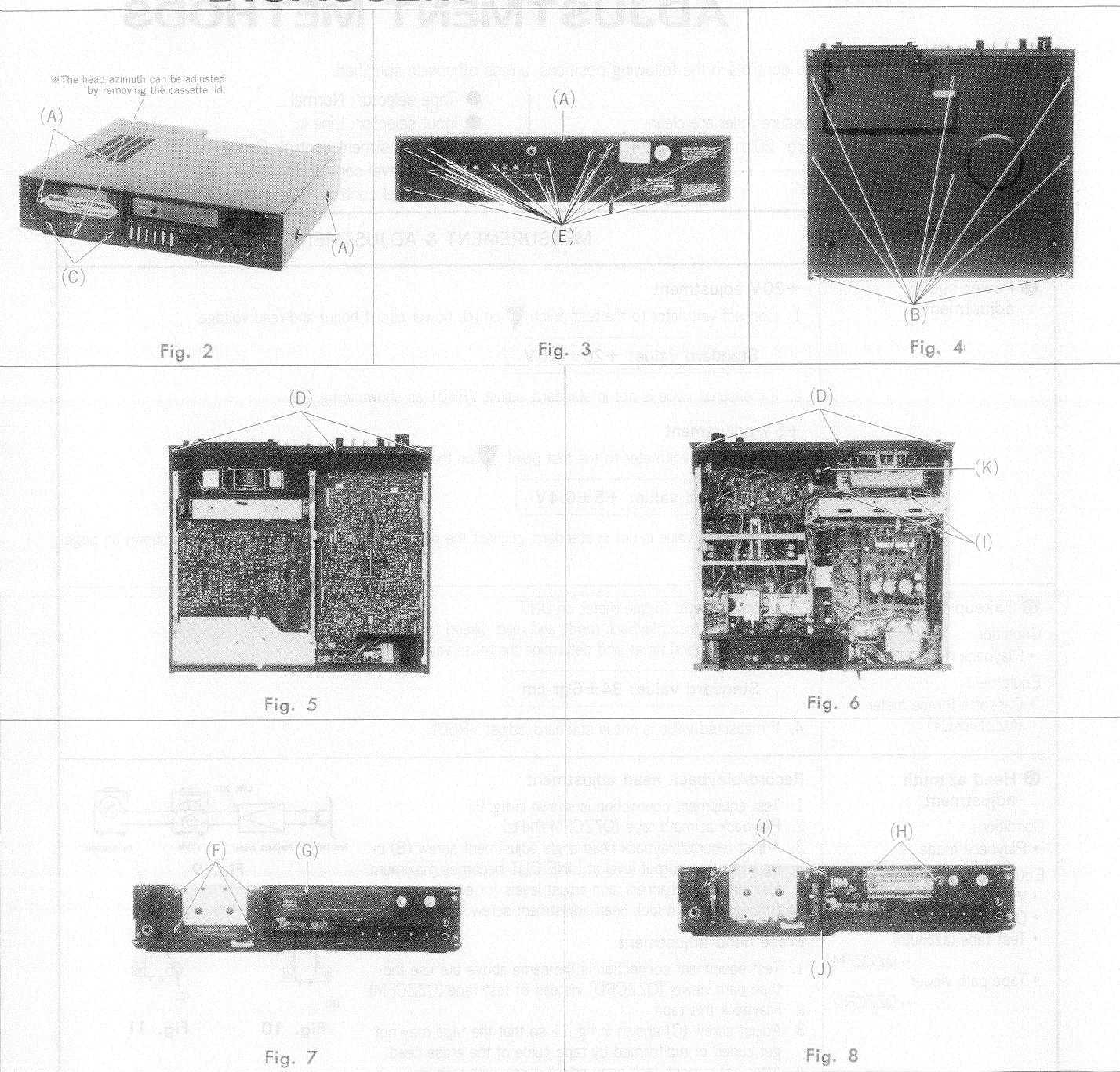


Fig. 8

| Procedure | To remove | Remove | Shown in fig. |
|-----------|-----------------|---|----------------|
| 1 | Case cover | • 5 black screws(A) | 2, 3 |
| 2 | Bottom cover | • 9 screws(B) | 4 |
| 3 | Front panel | • 2 cassette lid holding screws(C) • 6 red screws(D) | 2 5, 6 |
| 4 | Back cover | • 16 black screws(E) | 3 |
| 5 | Cassette holder | • 4 screws(F) | 7 |
| 5 | FL level meter | • Meter cover(G) • 2 meter holders(H) | 7 8 |
| 5 | Mechanism | • 4 red screws(I) • 1 black screw(J) • Tape counter belt(K) | 6, 8 8 6 |

DISASSEMBLY INSTRUCTIONS

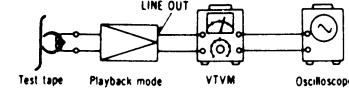
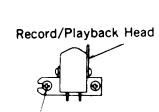
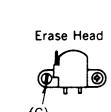
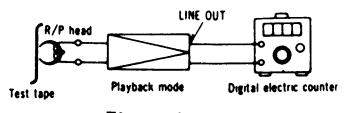


| Procedure | To remove | Remove | Shown in fig. |
|-----------|-----------------|--|----------------|
| 1 | Case cover | • 5 black screws (A) | 2, 3 |
| 2 | Bottom cover | • 9 screws (B) | 4 |
| 3 | Front panel | • 2 cassette lid holding screws (C) • 6 red screws (D) | 2 5, 6 |
| 4 | Back cover | • 16 black screws (E) | 3 |
| 5 | Cassette holder | • 4 screws (F) | 7 |
| 5 | FL level meter | • Meter cover (G) • 2 meter holders (H) | 7 8 |
| 5 | Mechanism | • 4 red screws (I) • 1 black screw (J) • Tape counter belt (K) | 6, 8 8 6 |

MEASUREMENT AND ADJUSTMENT METHODS

NOTE: Set lever switches and controls in the following positions, unless otherwise specified.

- Make sure heads are clean.
- Make sure capstan and pressure roller are clean.
- Judgeable room temperature: $20 \pm 5^\circ\text{C}$ ($68 \pm 9^\circ\text{F}$)
- Meter selector: Peak, dim
- Dolby NR switch: OUT
- Tape selector: Normal
- Input selector: Line in
- Bias adjustment control: Center
- Output level control: Maximum
- Input level control: Maximum

| ITEM | MEASUREMENT & ADJUSTMENT |
|--|---|
| A Power supply adjustment | <p>+20V adjustment</p> <p>1. Connect voltmeter to the test point ∇ on the power circuit board and read voltage. Standard value: $+20 \pm 0.5\text{ V}$</p> <p>2. If measured value is not in standard, adjust VR401 as shown in fig. 29.</p> <p>+5V adjustment</p> <p>1. Connect DC voltmeter to the test point ∇^2 on the power circuit board and read voltage. Standard value: $+5 \pm 0.4\text{ V}$</p> <p>2. If measured value is not in standard, connect the point \square on the power circuit board as shown on page 14.</p> |
| B Takeup tension Condition: * Playback mode Equipment: * Cassette torque meter (QZZSRKCT) | <p>1. Mount cassette torque meter on UNIT.</p> <p>2. Place UNIT into playback mode and read takeup torque.</p> <p>3. Measure several times and determine the mean value. Standard value: $34 \pm 6 \text{ gr-cm}$</p> <p>4. If measured value is not in standard, adjust VR601.</p> |
| C Head azimuth adjustment Condition: * Playback mode Equipment: * VTVM * Oscilloscope * Test tape (azimuth) ... QZZCFM * Tape path viewer ... QZZCRD | <p>Record/playback head adjustment</p> <p>1. Test equipment connection is shown in fig. 9.</p> <p>2. Playback azimuth tape (QZZCFM 8kHz).</p> <p>3. Adjust record/playback head angle adjustment screw (B) in fig.10 so that output level at LINE OUT becomes maximum.</p> <p>4. Measure both channels, and adjust levels for equal output.</p> <p>5. After adjustment lock head adjustment screw with lacquer.</p> <p>Erase head adjustment</p> <p>1. Test equipment connection is the same above but use the tape path viewer (QZZCRD) instead of test tape (QZZCFM).</p> <p>2. Playback this tape.</p> <p>3. Adjust screw (C) shown in fig. 11 so that the tape may not get curled or malformed by tape guide of the erase head.</p> <p>4. After adjustment, lock head adjust screw with lacquer.</p>  <p>Fig. 9</p>  <p>Fig. 10</p>  <p>Fig. 11</p> |
| D Tape speed Condition: * Playback mode Equipment: * Digital electronic counter * Test tape ... QZZCWAT | <p>Tape speed accuracy</p> <p>1. Test equipment connection is shown in fig. 12.</p> <p>2. Playback test tape (QZZCWAT 3,000Hz), and supply playback signal to frequency counter.</p> <p>3. Measure this frequency.</p> <p>4. On the basis of 3,000Hz, determine value by following formula:</p> $\text{Tape speed accuracy} = \frac{f - 3,000}{3,000} \times 100 (\%)$ <p>where, f = measured value</p> <p>5. Take measurement at middle section of tape. Standard value: $\pm 0.4\%$</p>  <p>Fig. 12</p> |

| ITEM | MEASUREMENT & ADJUSTMENT |
|---|---|
| | <p>Tape speed fluctuation</p> <p>Make measurements in same manner as above (beginning, middle and end of tape), and determine the difference between maximum and minimum values and calculate as follows:</p> $\text{Tape speed fluctuation} = \frac{f_1 - f_2}{3,000} \times 100 (\%)$ <p>f_1 = maximum value, f_2 = minimum value</p> <p style="border: 1px solid black; padding: 5px; text-align: center;">Standard value: Less than 0.3%</p> |
| E Capstan motor circuit adjustment Condition: * Playback mode Equipment: * VTVM * Oscilloscope | <p>A. Standard DC power supply voltage adjustment</p> <ol style="list-style-type: none"> Measure the DC voltage between central point of VR703 and ⑥ terminal of IC702 as shown in fig.13. <p style="border: 1px solid black; padding: 5px; text-align: center;">Standard voltage: 0 ± 0.05 V</p> <ol style="list-style-type: none"> If measured voltage is not within standard, adjust VR703. <p>B. Phase lock point adjustment</p> <ol style="list-style-type: none"> Measure the DC voltage between ④ terminal of IC702 and ground as shown in fig. 14. <p style="border: 1px solid black; padding: 5px; text-align: center;">Standard voltage: 5.2 ± 0.1 V</p> <ol style="list-style-type: none"> If measured voltage is not within standard, adjust VR702. <p>C. Position detecting signal output level adjustment</p> <ol style="list-style-type: none"> Connect oscilloscope to test point (T.P [P-V]). Measure the peak-to-peak voltage of position detection signal of test point with the oscilloscope. If the measured signal voltage is markedly different from the voltage shown in fig. 16, make the necessary adjustment with the VR701. |
| F Playback frequency response Condition: * Playback mode * Output level control ... MAX Equipment: * VTVM * Oscilloscope * Test tape ... QZZCFM | <ol style="list-style-type: none"> Test equipment connection is as same as "Head azimuth adjustment" but use the test tape (QZZCFM) instead of head azimuth tape (See fig. 9). Place UNIT into playback mode. Playback the frequency response test tape (QZZCFM). Measure output level at 12.5 kHz, 8 kHz, 4 kHz, 1 kHz, 250 Hz, 315 Hz and 63 Hz, and compare each output level with the standard frequency 315 Hz, at LINE OUT. Make measurement for both channels. Make sure that the measured value is within the range specified in the frequency response chart. If measured value is not in standard, adjust VR1 (L-CH), VR2 (R-CH) (See fig. 29). |
| G Playback gain Condition: * Playback mode * Output level control ... MAX Equipment: * VTVM * Oscilloscope * Test tape ... QZZCFM | <ol style="list-style-type: none"> Test equipment connection is shown in fig. 9. Playback standard recording level portion on test tape (QZZCFM 315Hz), and using VTVM measure the output level at LINE OUT jack. Make measurement for both channels. <p style="border: 1px solid black; padding: 5px; text-align: center;">Standard value: 0.66 ± 0.05 V</p> <p>Adjustment</p> <ol style="list-style-type: none"> If measured value is not standard, adjust VR3 (L-CH), VR4 (R-CH) (See fig. 29). After adjustment, check "Playback frequency response" again. |

| ITEM | MEASUREMENT & ADJUSTMENT |
|---|---|
| H Bias leak Condition: * Record mode * Input level control ... MAX Equipment: * VTVM * Oscilloscope | 1. Test equipment connection is shown in fig. 18 (See AMP circuit board on page 10). 2. Place UNIT into record mode. 3. Adjust trap coils L9 (L-CH), L10 (R-CH), so that measured value becomes minimum (See fig. 29). 4. Make adjustment for both channels. |
| I Erase current Condition: * Record mode * Bias adjustment control ... Center Equipment: * VTVM * Oscilloscope | 1. Test equipment connection is shown in fig. 19. 2. Place UNIT into record mode and measure voltage at test point 7. 3. Determine erase current with the following formula. $\text{Erase current (A)} = \frac{\text{Voltage across both ends of R159}}{1 (\Omega)}$ <div style="border: 1px solid black; padding: 5px; text-align: center;"> Standard value: $95 \pm 5 \text{ mA}$ (Tape selector ... Metal) </div> 4. If measured value is not within standard, adjust VR803. |
| J Bias current Condition: * Record mode * Bias adjustment control ... Center Equipment: * VTVM * Oscilloscope * AF oscillator * ATT * Test tape (reference blank tape) ... QZZCRA for Normal ... QZZCRX for CrO ₂ ... QZZCRY for Fe-Cr ... QZZCRZ for Metal | <p>A. Adjustment of metal tape</p> 1. Test equipment connection is shown in fig. 20. 2. Place the test tape (QZZCRZ) in the cassette holder. 3. Press the record and pause buttons. 4. Set the tape selector to metal position. 5. Supply 1kHz signal from AF oscillator through ATT to LINE IN. 6. Adjust ATT so that input level is -20 dB below standard recording level. 7. At this time, LINE OUT level indicates 0.066 V. 8. Record 1kHz and 13kHz signals. 9. Playback and express in dB the difference between output levels of 13kHz and 1kHz. 10. Make sure output level of 13kHz is not within $+1 \pm 2 \text{ dB}$ compared with output level of 1kHz. 11. If measured value is not within $+1 \pm 2 \text{ dB}$, adjust VR13 (L-CH only). |

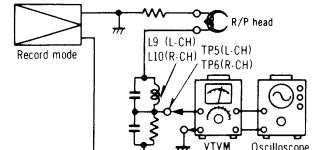


Fig. 18

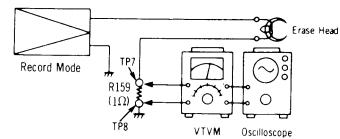


Fig. 19

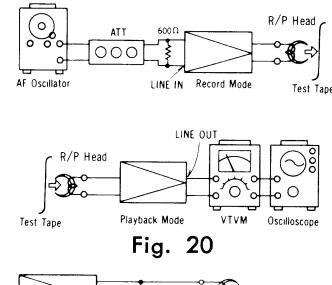


Fig. 20

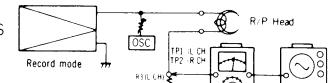


Fig. 21

B. Adjustment of normal tape

12. Set the tape selector to normal position (Test tape QZZCRA).
13. Change test tape to normal tape (QZZCRA).
14. Press the record and playback buttons.
15. Record 1kHz and 8kHz signals.
16. Playback and express in dB the difference between output levels of 8kHz and 1kHz.
17. Make sure output level of 8kHz is not within $+2 \pm 2 \text{ dB}$ compared with output level of 1kHz.
18. If measured value is not within $+2 \pm 2 \text{ dB}$, adjust VR12 (L-CH), VR14 (R-CH).

C. Adjustment of Fe-Cr tape and CrO₂ tape

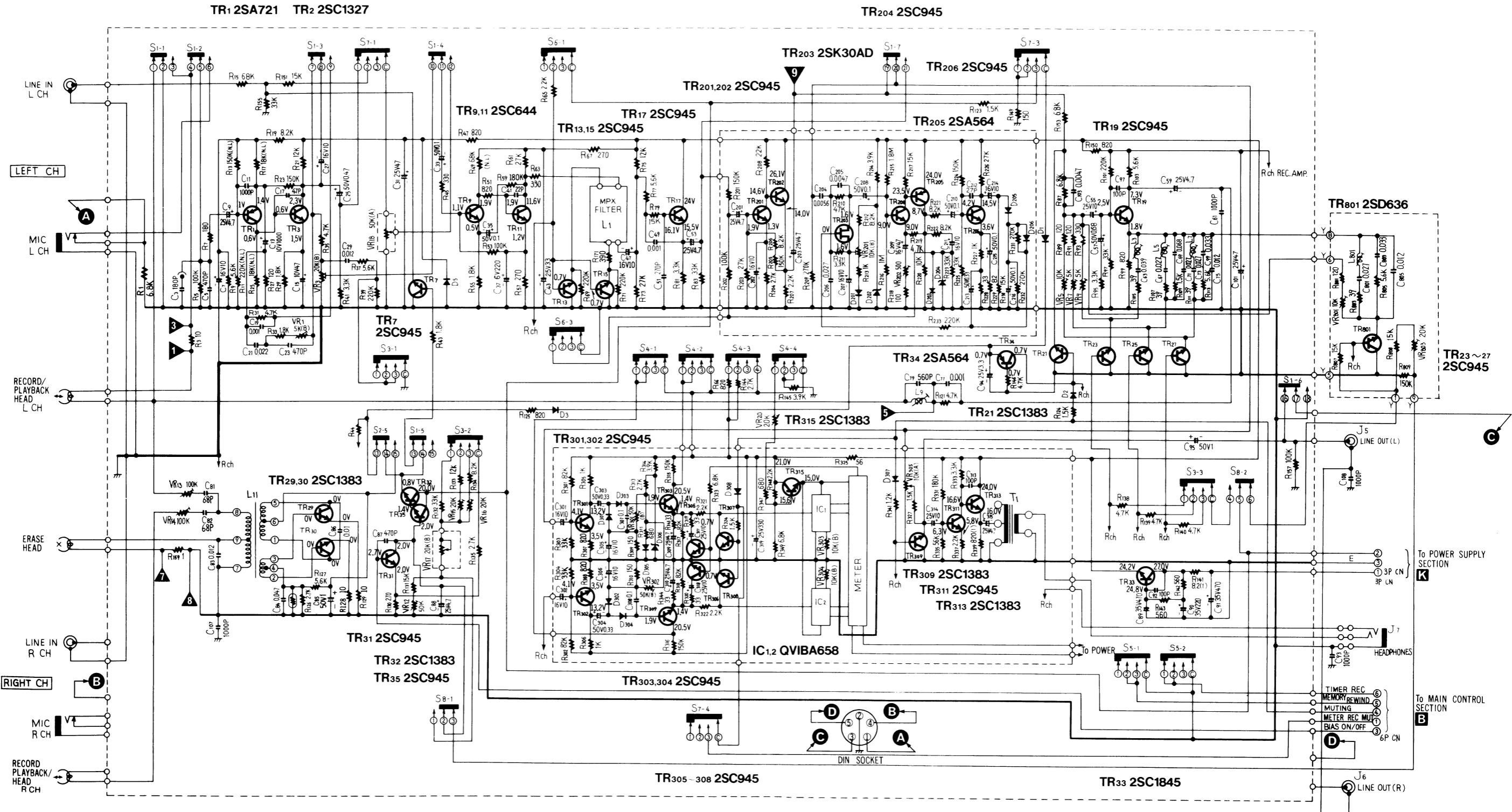
19. Set the tape selector to Fe-Cr position.
20. Change test tape to Fe-Cr tape (QZZCRY).
21. Press the record and playback buttons.
22. Record 1kHz and 8kHz signals.
23. Playback and express in dB the difference between output levels of 8kHz and 1kHz.
24. Make sure output level of 8kHz is not within $+1 \pm 1 \text{ dB}$, compared with output level of 1kHz.
25. If measured value is not within $+1 \pm 1 \text{ dB}$, adjust VR15.
26. Set the tape selector to CrO₂ position.
27. Change test tape to CrO₂ tape (QZZCRX).
28. Make the same measurements and adjustments described in steps 21 to 24 above.
29. If measured value is not within $+1 \pm 1 \text{ dB}$, adjust VR16.

| ITEM | MEASUREMENT & ADJUSTMENT | | | | |
|---|--|--------------------------------------|------------------------------------|---|--|
| | <p>Measurement</p> <ol style="list-style-type: none"> Test equipment connection is shown in fig. 21. Place UNIT into record mode. Read voltage on VTVM and calculate bias current by following formula. $\text{Bias current (A)} = \frac{\text{Value read on VTVM (V)}}{10 (\Omega)}$ <p style="border: 1px solid black; padding: 5px; text-align: center;">Standard value: around $600\mu\text{A}$ (Metal position), around $310\mu\text{A}$ (Normal position), around $350\mu\text{A}$ (Fe-Cr position), around $420\mu\text{A}$ (CrO₂ position)</p> | | | | |
| <p>K Overall gain</p> <p>Condition:</p> <ul style="list-style-type: none"> * Record/playback mode * Input level control ... MAX * Standard input level: MIC $-72 \pm 3 \text{ dB}$ LINE IN $-24 \pm 3 \text{ dB}$ DIN $-72 \pm 3 \text{ dB}$ * Bias adjustment control ... Center * Output level control ... MAX <p>Equipment:</p> <ul style="list-style-type: none"> * VTVM * AF oscillator * ATT * Oscilloscope * Test tape (reference blank tape) ... QZZCRA for Normal ... QZZCRX for CrO₂ ... QZZCRY for Fe-Cr ... QZZCRZ for Metal | <ol style="list-style-type: none"> Test equipment connection is shown in fig. 22. Place UNIT into record mode. Supply 1kHz signal (-24 dB) from AF oscillator, through ATT to LINE IN. Adjust ATT until monitor level at LINE OUT becomes 0.66 V. Using test tape, make recording. Playback recorded tape, and measure the output level at LINE OUT on VTVM. <p style="border: 1px solid black; padding: 5px; text-align: center;">Standard value: $0.66 \pm 0.05 \text{ V}$</p> <ol style="list-style-type: none"> If measured value is not within standard, adjust the following VR. <table> <tr> <td>Normal VR9 (L-CH), VR10 (R-CH)</td> </tr> <tr> <td>Fe-Cr VR7 (L-CH), VR8 (R-CH)</td> </tr> <tr> <td>CrO₂ VR5 (L-CH), VR6 (R-CH)</td> </tr> <tr> <td>Metal VR801 (L-CH), VR802 (R-CH)</td> </tr> </table> <p style="text-align: right;">Fig. 22</p> | Normal VR9 (L-CH), VR10 (R-CH) | Fe-Cr VR7 (L-CH), VR8 (R-CH) | CrO ₂ VR5 (L-CH), VR6 (R-CH) | Metal VR801 (L-CH), VR802 (R-CH) |
| Normal VR9 (L-CH), VR10 (R-CH) | | | | | |
| Fe-Cr VR7 (L-CH), VR8 (R-CH) | | | | | |
| CrO ₂ VR5 (L-CH), VR6 (R-CH) | | | | | |
| Metal VR801 (L-CH), VR802 (R-CH) | | | | | |
| <p>L Fluorescent meter</p> <p>Condition:</p> <ul style="list-style-type: none"> * Record mode * Input level control ... MAX * Output level control ... MAX * Tape selectors ... Normal position <p>Equipment:</p> <ul style="list-style-type: none"> * VTVM * AF oscillator * ATT | <ol style="list-style-type: none"> Test equipment connection is shown in fig. 23. Set the meter function selector to the "bright" position. Supply 1kHz signal (-24 dB) to the LINE IN jack, then press the record button. Adjust the ATT so that the output level at LINE OUT jack becomes 0.66 V (= standard input level). Adjustment at "0dB": A. Adjust VR303 (L-CH) and VR304 (R-CH) so that the Fluorescent meters show an illuminated indication up to "0dB" when the input signal level is 0.9 dB higher than the standard input level. B. Then confirm that the Fluorescent meters show an illuminated indication up to "+1dB" when the input signal level is 1 dB higher than the standard input level. Adjustment at "-20dB": A. Adjust VR301 (L-CH) and VR302 (R-CH) so that the Fluorescent meters show an illuminated indication up to "-20dB" when the input signal level is 15.1 dB lower than the standard input level. B. Then confirm that the Fluorescent meters show an illuminated indication up to "-15dB" when the input signal level is 15 dB lower than the standard input level. Repeat twice between steps 3 and 6 above. <p style="text-align: right;">Fig. 23</p> <p style="text-align: right;">Fig. 24</p> | | | | |
| <p>M Overall frequency response</p> <p>Condition:</p> <ul style="list-style-type: none"> * Record/playback mode * Input level control ... MAX * Bias adjustment control ... Center | <p>Note:</p> <p>Before measuring and adjusting, make sure of the playback frequency response (For the method of measurement, please refer to the playback frequency response).</p> <ol style="list-style-type: none"> Test equipment connection is shown in fig. 22. Load reference blank test tape and place UNIT into record mode. <p style="text-align: right;">Fig. 25</p> | | | | |

| ITEM | MEASUREMENT & ADJUSTMENT | | | | | | | | |
|--|--|----------------------|-------------|----------------------|------------------------|----------------------|-------------|------------------------|-------------------------------|
| <p>Equipment:</p> <ul style="list-style-type: none"> * VTVM * AF oscillator * ATT * Test tape (reference blank tape) <ul style="list-style-type: none"> ... QZZCRA for Normal ... QZZCRX for CrO₂ ... QZZCRY for Fe-Cr ... QZZCRZ for Metal | <ol style="list-style-type: none"> 3. Supply 1kHz signal from AF oscillator through ATT to LINE IN. 4. Adjust ATT so that input level is -20 dB below standard recording level (standard recording level = 0 VU). 5. At this time, LINE OUT level indicates 0.066 V. 6. Record each frequency 30Hz, 40Hz, 70Hz, 700Hz, 1kHz, 2kHz, 7kHz, 10kHz and 13.5kHz (16kHz for CrO₂, Fe-Cr and Metal) at the same level. 7. Playback and express in dB the difference between playback output level of each frequency based on playback output level of 1kHz. 8. Make sure that the measured value is within the range specified in the overall frequency response chart. <p>Overall frequency response chart (CrO₂, Fe-Cr, Metal)</p> <p>Fig. 26</p> | | | | | | | | |
| <p>Adjustment-1</p> <ol style="list-style-type: none"> 1. When the frequency response between the middle and high frequency range becomes higher than the standard value, as shown by the solid line in fig. 27 increase, refer to bias current adjustment. 2. When it becomes lower, as shown by dotted line, refer to bias current adjustment. <p>Note:</p> <ol style="list-style-type: none"> 1. For adjustment when the bias current is lower than the standard value use the procedure indicated in adjustment 2, because reducing the bias current beyond this point may worsen the distortion factor. 2. For the method of bias current measurement, refer to "Bias current adjustment" on page 5. <p>Adjustment-2</p> <p>When the frequency response is flat in the middle frequency range and makes a sharp rise or drop in the high frequency range, as shown in fig. 28, adjust by turning the following peaking coils.</p> <table border="0"> <tr> <td>Normal</td> <td>L3 (L-CH), L4 (R-CH)</td> </tr> <tr> <td>Fe-Cr</td> <td>L5 (L-CH), L6 (R-CH)</td> </tr> <tr> <td>CrO₂</td> <td>L7 (L-CH), L8 (R-CH)</td> </tr> <tr> <td>Metal</td> <td>L801(L-CH), L802(R-CH)</td> </tr> </table> | Normal | L3 (L-CH), L4 (R-CH) | Fe-Cr | L5 (L-CH), L6 (R-CH) | CrO ₂ | L7 (L-CH), L8 (R-CH) | Metal | L801(L-CH), L802(R-CH) | <p>Fig. 27</p> <p>Fig. 28</p> |
| Normal | L3 (L-CH), L4 (R-CH) | | | | | | | | |
| Fe-Cr | L5 (L-CH), L6 (R-CH) | | | | | | | | |
| CrO ₂ | L7 (L-CH), L8 (R-CH) | | | | | | | | |
| Metal | L801(L-CH), L802(R-CH) | | | | | | | | |
| <p>Dolby NR circuit</p> <p>Condition:</p> <ul style="list-style-type: none"> * Record mode * Input level control ... MAX <p>Equipment:</p> <ul style="list-style-type: none"> * VTVM * AF oscillator * ATT * Oscilloscope | <ol style="list-style-type: none"> 1. Place UNIT into record mode, set the Dolby NR switch to OUT position and supply to LINE IN to obtain -34.5 dB at TP9 (L-CH), TP10 (R-CH) (frequency 5kHz). 2. Confirm that the value at IN position is 8dB greater than the value at OUT position of Dolby NR switch. 3. When it is not in condition above, adjust as follows. 4. Set the VR201 to maximum. 5. Set the Dolby NR switch to IN position. 6. At this time adjust VR202 so that the reading of VTVM becomes 10dB greater than the value in step (1) above. 7. Adjusting VR201 make the reading of VTVM becomes 2dB smaller than the value obtained through the adjustment in step (6) above. | | | | | | | | |

SCHEMATIC DIAGRAM

Main Amp Section



NOTE:

- S1-1~S1-7, S2-1~S2-7 Record/playback select switch (shown in playback position).
- S3-1~S3-4 Tape select switch (1...normal, 2...Fe-Cr, 3...CrO₂).
- S4-1~S4-4 Meter select switch (1...peak/bright, 2...peak/dim, 3...VU/dim).
- S5-1, S5-2 Function switch (1...memory rew, 2...off, 3...timer rec).
- S6-1~S6-4 Dolby NR select switch (1...Dolby "OUT", filter "OUT", 2...Dolby "IN", filter "IN", 3...Dolby "IN", filter "OUT").
- S7-1~S7-4 Input select switch (1...mic, 2...line in, 3...rec mute).
- S8-1, S8-2 Tape select switch (for metal tape).
- VR1, 2 Playback equalizer adjustment VR.
- VR3, 4 Playback level adjustment VR.
- VR5, 6 Standard recording level adjustment VR (for CrO₂ tape).
- VR7, 8 Standard recording level adjustment VR (for Fe-Cr tape).
- VR9, 10 Standard recording level adjustment VR (for normal tape).

- VR12 Bias current adjustment VR (for normal tape).
- VR13 Bias current adjustment VR (for metal tape).
- VR14 Bias current adjustment VR (for normal tape).
- VR15 Bias current adjustment VR (for Fe-Cr tape).
- VR16 Bias current adjustment VR (for CrO₂ tape).
- VR17 Bias current adjustment control.
- VR18, 19 Input level control.
- VR20 Meter brightness adjustment control.
- VR201, 202 Dolby NR adjustment VR.
- VR301, 302 Fluorescent level meter adjustment VR (for -20dB indication).
- VR303, 304 Fluorescent level meter adjustment VR (for 0dB indication).
- VR305, 306 Output level control.
- VR801, 802 Standard recording level adjustment VR (for metal tape).
- VR803 Erase current adjustment VR (for metal tape).
- L3, 4 Recording equalizer adjustment coil (for normal tape).
- L5, 6 Recording equalizer adjustment coil (for Fe-Cr tape).
- L7, 8 Recording equalizer adjustment coil (for CrO₂ tape).
- L801, 802 Recording equalizer adjustment coil (for metal tape).
- Resistance are in ohms (Ω), 1/4 watt unless specified otherwise.
 $K = 1,000 \Omega$.
- Capacity are in microfarads (μF) unless specified otherwise.
 $P = \text{Pico-farads}$.
- All voltage values shown in circuitry under no signal condition and record mode with volume control at minimum position.
For measurement, use VTVM.

* Input level control ... MAX
* Output level control ... MAX

SPECIFICATIONS

| | |
|---|--------------------|
| Playback S/N ratio Test tape ... QZZCFM | Greater than 47 dB |
| Overall distortion Test tape ... QZZCRA for Normal ... QZZCRX for CrO ₂ ... QZZCRY for Fe-Cr ... QZZCRZ for Metal | Less than 3% |
| Overall S/N ratio Test tape ... QZZCRA (without NAB filter) | Greater than 45 dB |

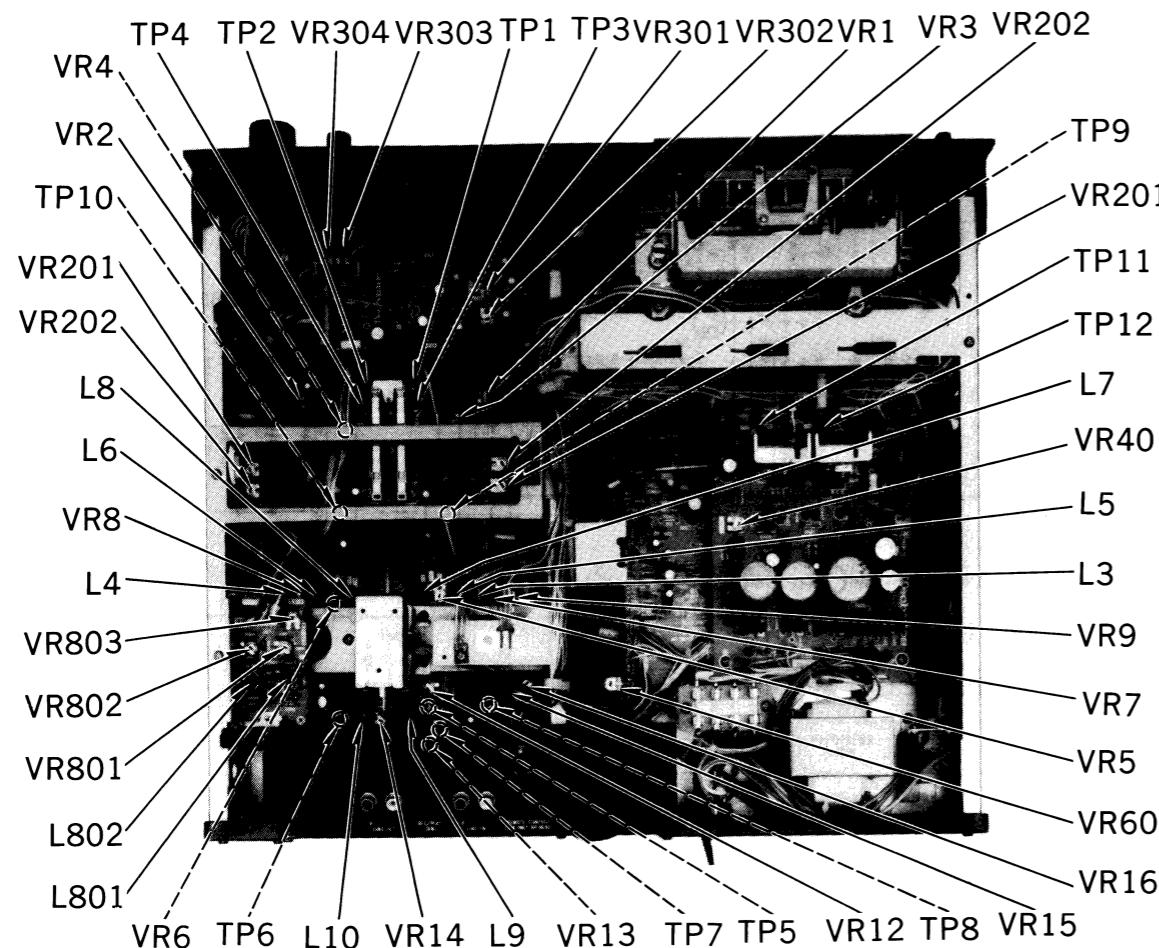
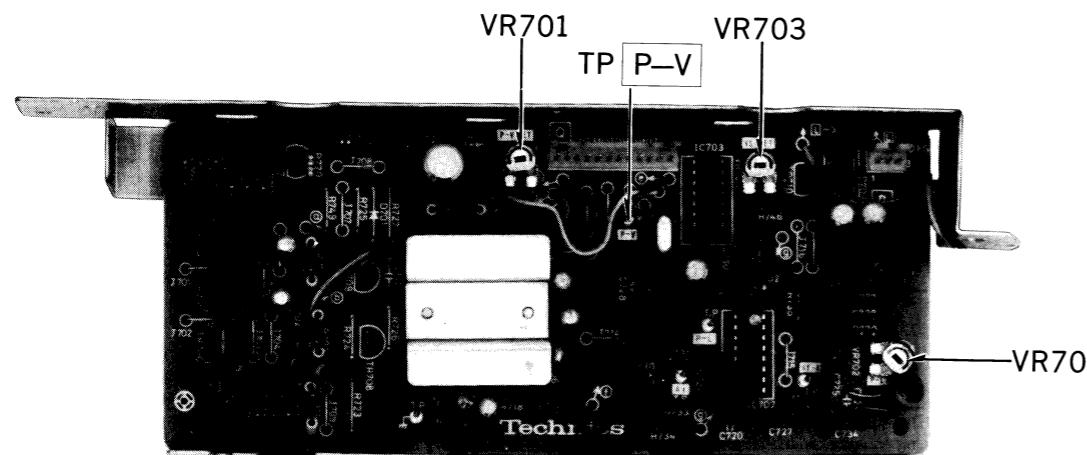
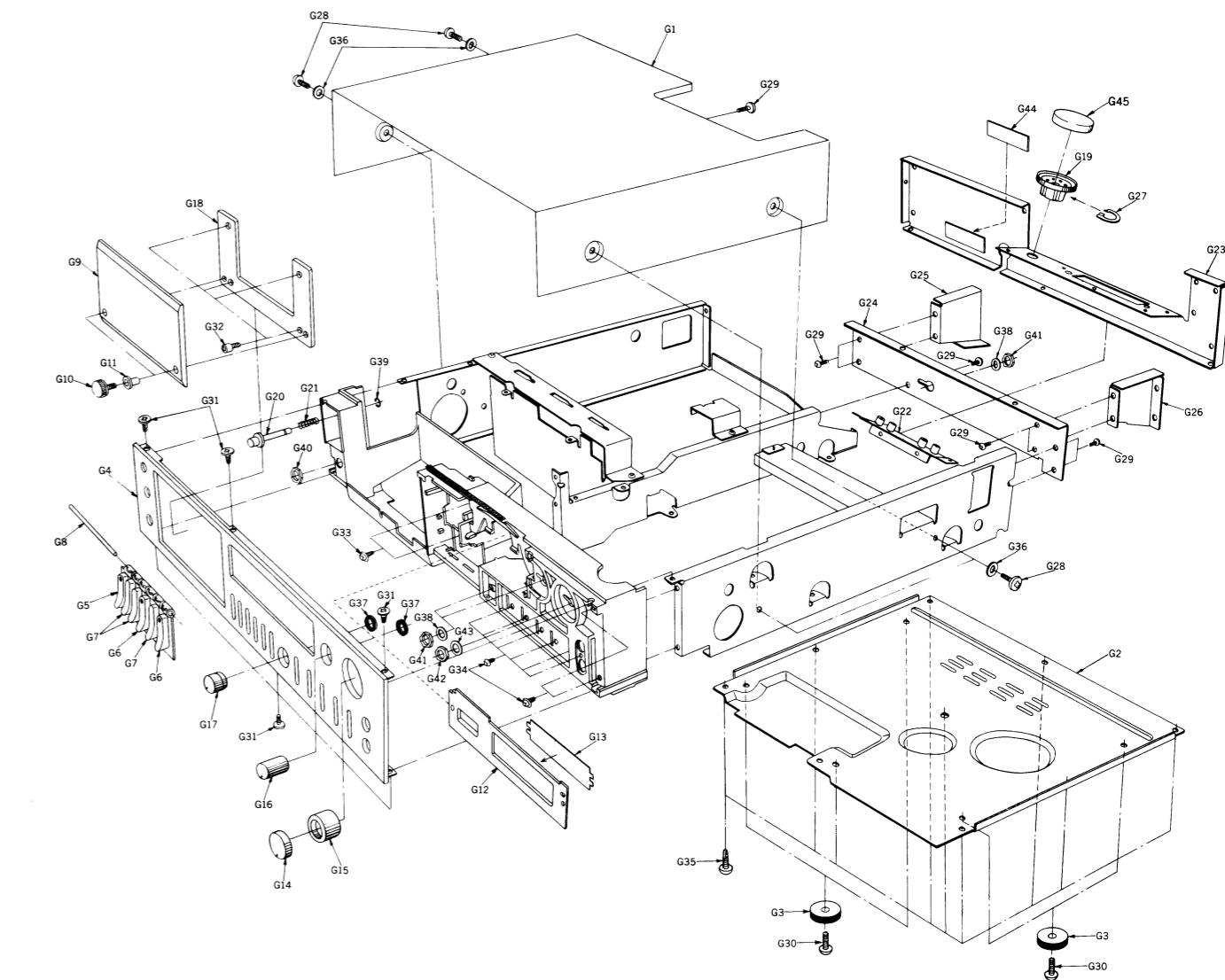
ADJUSTMENT PARTS LOCATION**CABINET PARTS**

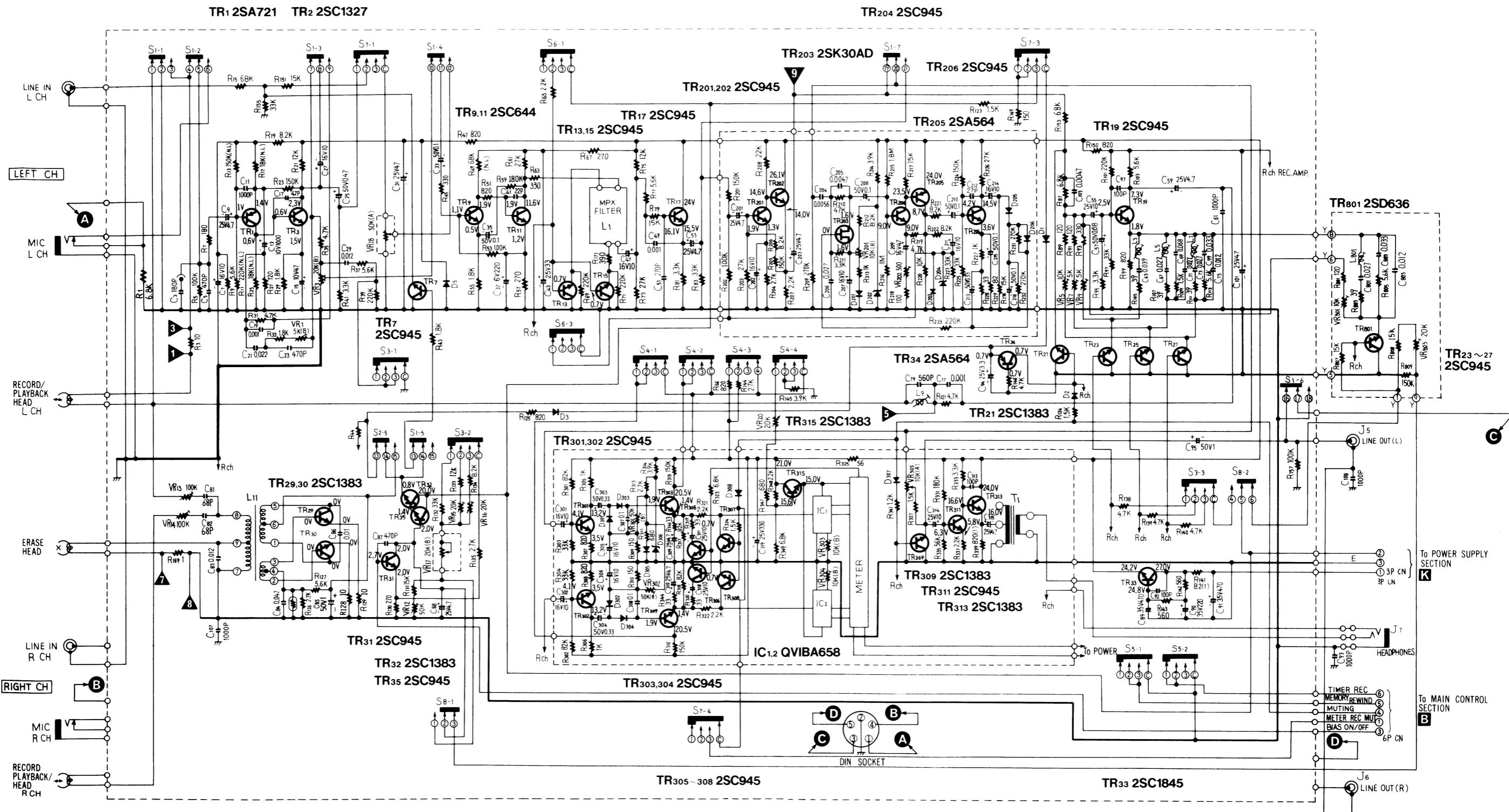
Fig. 29

NOTE: Δ indicates that only parts specified by the manufacturer be used for safety.

| Ref. No. | Part No. | Part Name & Description | Ref. No. | Part No. | Part Name & Description | Ref. No. | Part No. | Part Name & Description | Ref. No. | Part No. | Part Name & Description |
|----------------------|--|--------------------------------|----------|--|---|----------|---------------------|--|--|--------------|-------------------------|
| CABINET PARTS | | | | | | | | | | | |
| G1 | QGC1102 "Black Type" QGC1116 "Silver Type" | Case Cover | G13 | QGL1130 QYT0465 "Black Type" QYT0494 "Silver Type" | Meter Cover-B Volume Knob-A Assembly | G21 | QBC1216 QEJ5002S | Eject Button Spring Jack Board Assembly | G43 | XWS9AW | Washer 9 ϕ |
| G2 | QGC1089 | Bottom Cover | G14 | QYT0466A "Black Type" QYT0495 "Silver Type" | " | G22 | QMK1725 | Back Cover-A | G44 | QGS2723 | Name Plate |
| G3 | QKA1076 | Rubber Foot | G15 | QYT0466A "Black Type" QYT0495 "Silver Type" | Volume Knob-B Assembly | G23 | QMA3305 | Back Cover-B | *For All European areas except United Kingdom. | | |
| G4 | QYP0886 "Black Type" QYP0888 "Silver Type" | Front Panel Assembly | G16 | QYT0456 "Black Type" QYT0497 "Silver Type" | Volume Knob Assembly | G24 | QMA3306 | Back Cover Holder-R | G44 | QGS2725 | " |
| G5 | QXB0528 | Control Button (REC) | G17 | QYT0559 "Black Type" QYT0559S "Silver Type" | Volume Knob-C Assembly (bias adjust) | G25 | QMA3307 | Back Cover Holder-L | *For United Kingdom. | | |
| G6 | QXB0529 | Control Button (PLAY, PAUSE) | G18 | QXB0529 "Black Type" QXB0529S "Silver Type" | Cassette Lid | G26 | QMA3445 | Socket Angle | G45 | QBG1640 | Remote Cap |
| G7 | QGO1416 | Control Button (FF, REW, STOP) | G19 | QK2947 "Black Type" QK2947S "Silver Type" | " | G27 | QMA3445 | Screw 4x8 | A1 | RP023A | Connection Cord |
| G8 | QMN2266 | Button Shaft | G20 | QJS0803X QXB0527A "Black Type" QXB0577 "Silver Type" | Remote Control Socket | G28 | XSB4+BBVS | Tapping Screw 3x8 | A2 | QFTC30S011TZ | Demonstration Tape |
| G9 | QGK2804 | Cassette Lid | G31 | XTN3+8S | " | G29 | XTN3+8B | Tapping Screw 3x8 | A3 | QQT2671 | Instruction Book |
| G10 | QHQ1272 "Black Type" QHQ1280 "Silver Type" | Cassette Lid Holder | G32 | XVE26C4FZ "Black Type" XVE26A4FN "Silver Type" | " | G30 | XSN4+6S | Screw 4x6 | *For All European areas except United Kingdom. | | |
| G11 | QBG1551 QKJ0246 "Black Type" QKJ0313 "Silver Type" | Rubber Cushion | G33 | XTN3+8B | Tapping Screw 3x6 | P1 | OPN3904 | Inside Carton | | | |
| G12 | QKJ0246 "Black Type" QKJ0313 "Silver Type" | Meter Cover-A | G34 | XSN3+6BVS | Screw 3x6 | P2 | OPA0376 | Inner Cushion-A (Left) | | | |
| | | " | G35 | XTN4+8B | Tapping Screw 4x8 | P3 | OPA0377 | Inner Cushion-A (Right) | | | |
| | | " | G36 | XWG4FZ | Flat Washer 4 ϕ | P4 | OPA0378 | Inner Cushion-B (Left) | | | |
| | | " | G37 | QB-JT0017 | Button Cover | P5 | OPA0379 | Inner Cushion-B (Right) | | | |
| | | " | G38 | XWS8AW | Washer 8 ϕ | P6 | OPA0380 | Spacer (Bottom Side) | | | |
| | | " | G39 | XUC25FT | Stop Ring 2.5 ϕ | P7 | OPA0381 | Spacer (Top Side) | | | |
| | | " | G40 | QNQ1051 | Nut | P8 | XZB50X65A04 | Poly Bag | | | |
| | | " | G41 | QNQ1004 | " | | | | | | |
| | | " | G42 | QNQ1039 | " | | | | | | |

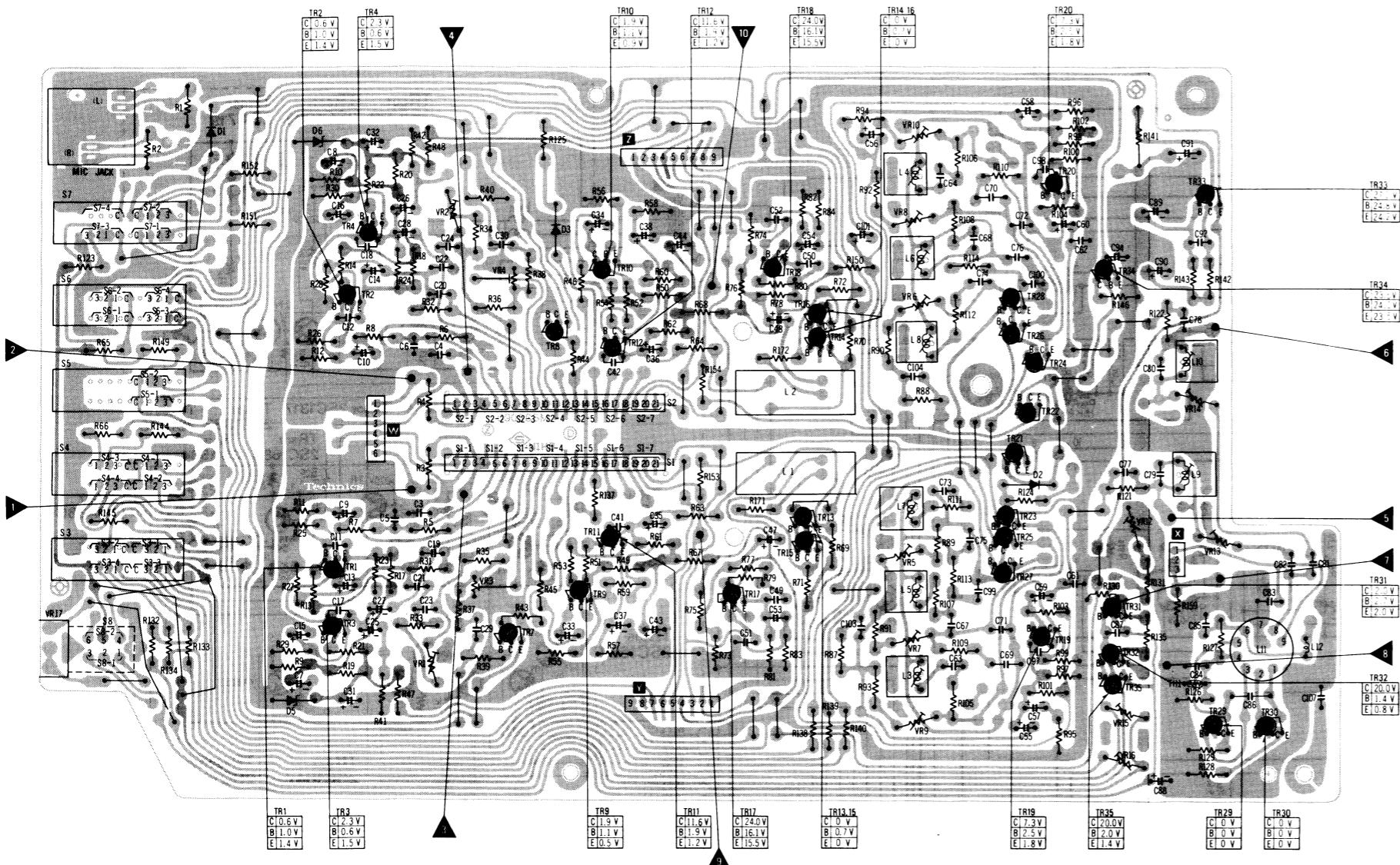
SCHEMATIC DIAGRAM

Main Amp Section

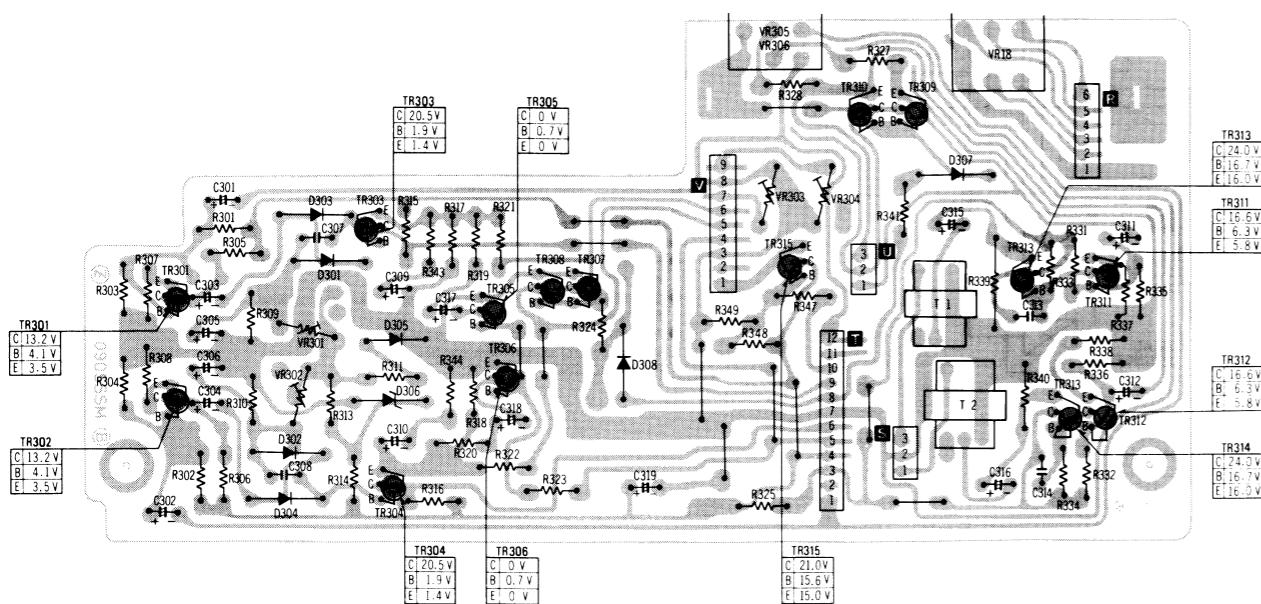


CIRCUIT BOARD

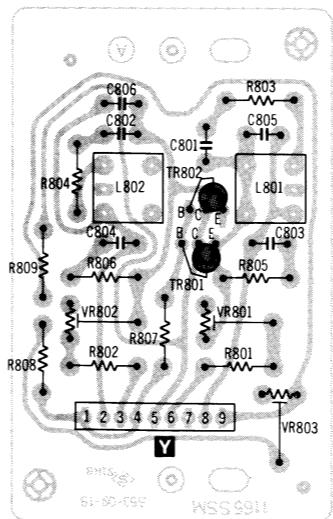
Main Amp



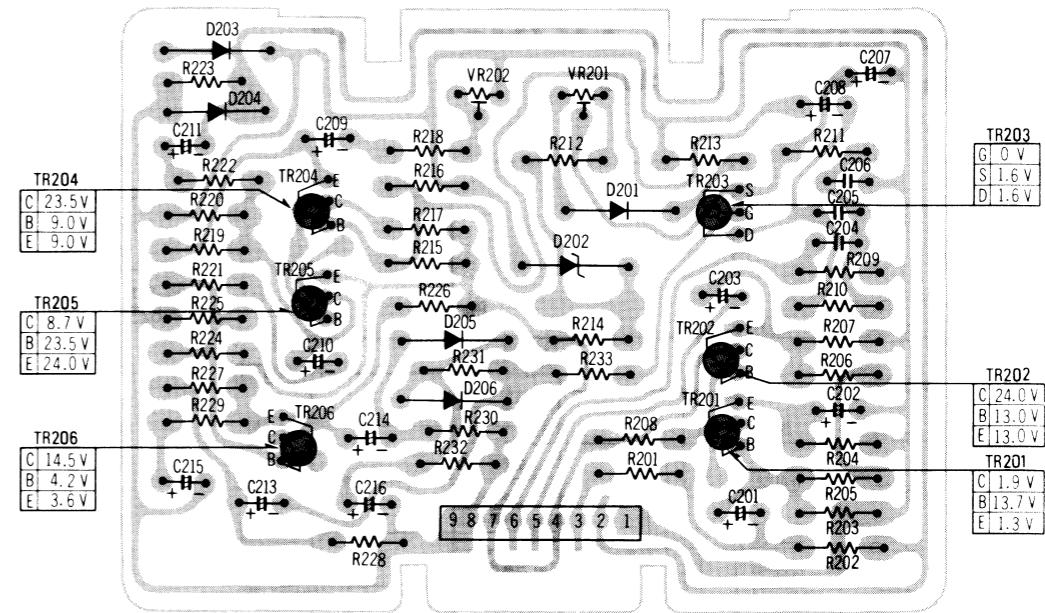
Output



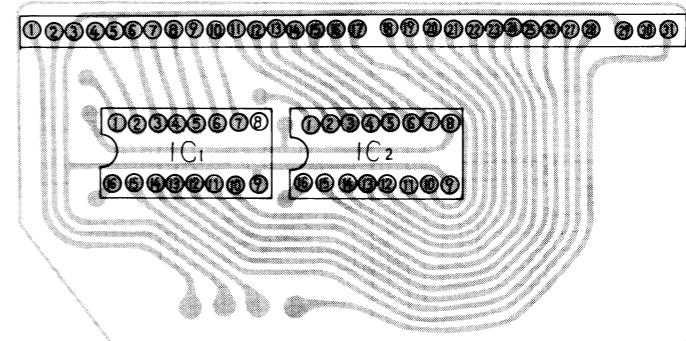
Equalizer



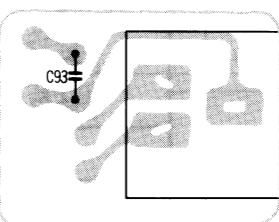
Dolby



FL Meter



Headphones Jack



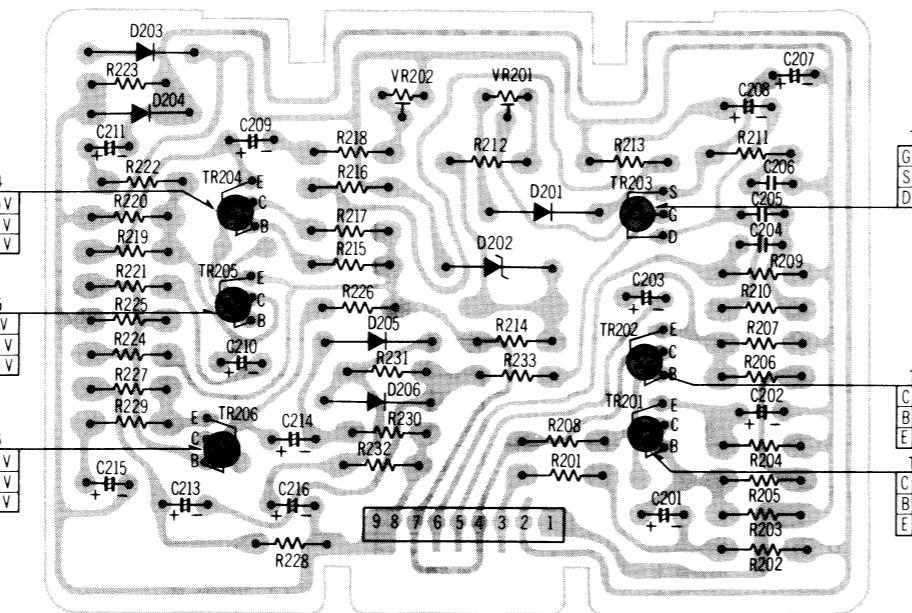
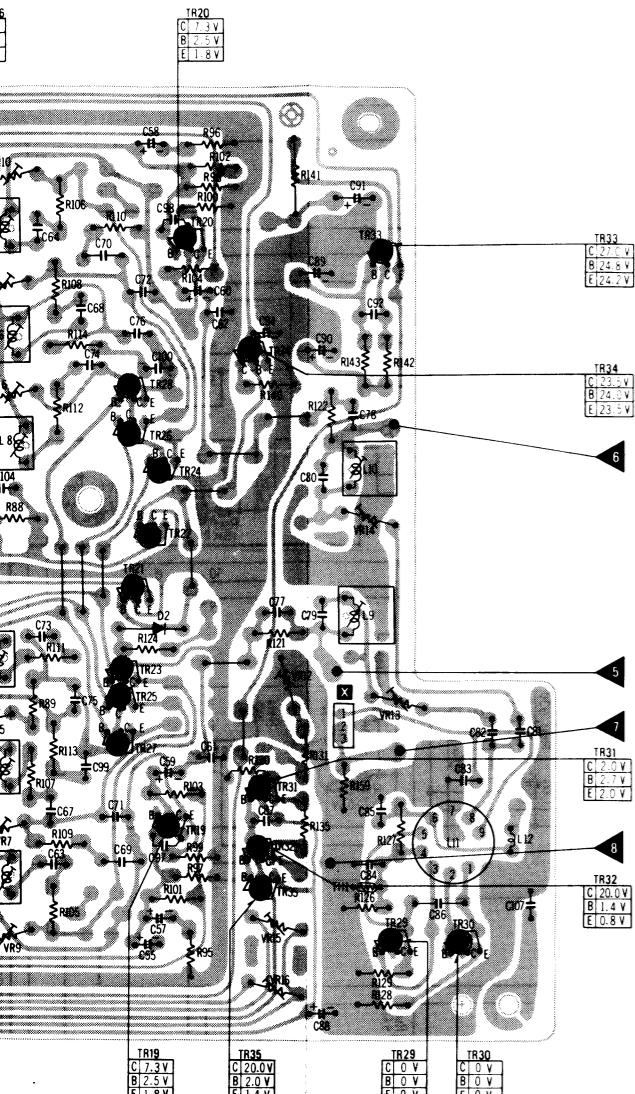
Jack



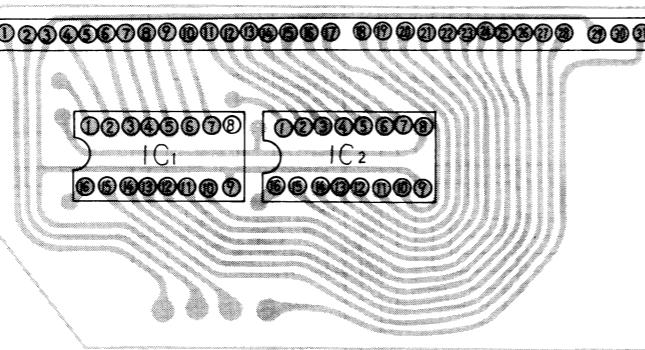
NOTE:

NOTE: The circuit shown in red on the conductor is B circuit. Values indicated in _____ are DC voltage between the chassis and electrical parts.

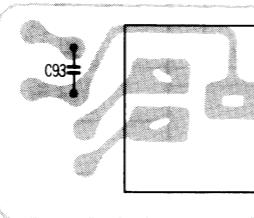
Dolby



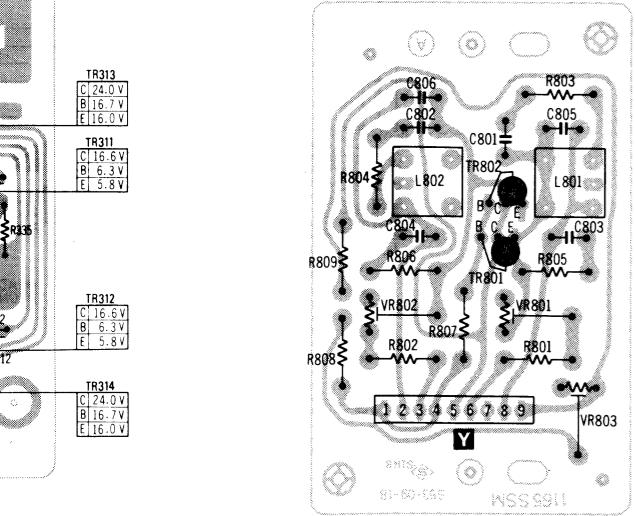
FL Meter



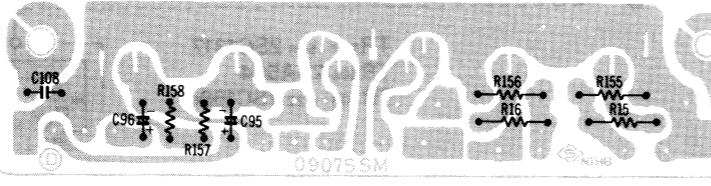
Headphones Jack



Equalizer



Jack



NOTE:

The circuit shown in red on the conductor is B circuit.
Values indicated in are DC voltage between the char
and electrical parts.

| NOTE: RESISTORS | CAPACITORS |
|----------------------------|-------------------------|
| ERD ... Carbon | ECG□ ... Ceramic |
| ERG ... Metal-oxide | ECK□ ... Ceramic |
| ERO ... Metal-film | ECC□ ... Ceramic |
| ERX ... Metal-film | ECF□ ... Ceramic |
| ERQ ... Fuse type metallic | ECQM ... Polyester Film |
| ERC ... Solid | ECQE ... Polyester Film |
| ERF ... Cement | ECQF ... Polypropylene |

NOTE: Δ indicates that only parts specified by the manufacturer be used for safety.

| Ref. No. | Part No. | Ref. No. | .Part No. | Ref. No. | Part No. | Ref. No. | Part No. | Ref. No. | Part No. |
|---------------------|------------|----------------|------------|-----------|------------|-----------|------------|-------------------------------|----------|
| RESISTORS | | | | | | | | | |
| R1, 2 | ERD25FJ682 | R128, 129 | ERD25FJ100 | R331, 332 | ERD25TJ184 | R544, 545 | ERD25FJ562 | R710, 711, 712, 713, 714, 715 | |
| R3, 4 | ERD25FJ100 | R130 | ERD25FJ271 | R333, 334 | ERD25TJ153 | R546 | ERD25TJ473 | ERD25FJ102 | |
| R5, 6 | ERD25TJ104 | R131 | ERD25TJ153 | R335, 336 | ERD25FJ332 | R547 | ERD25FJ562 | ERD25FJ272 | |
| R7, 8 | ERD25FJ181 | R132 | ERD25TJ333 | R335, 336 | ERD25TJ563 | R548 | ERD25TJ474 | ERD25FJ103 | |
| R9, 10 | ERD25FJ562 | R133 | ERD25TJ123 | R337, 338 | ERD25TJ222 | R549 | ERD25FJ101 | R719 | |
| R11, 12 | ERD25TJ224 | R134 | ERD25FJ822 | R339, 340 | ERD25FJ122 | R550 | ERD25FJ182 | R720 | |
| R13, 14 | ERD25TJ154 | R135 | ERD25FJ722 | R341 | ERG1ANJ821 | R551 | ERD25FJ562 | ERX12ANJ5R6 | |
| R15, 16 | ERD25TJ683 | R138, 139, 140 | ERD25FJ472 | R343, 344 | ERD25FJ122 | R552 | ERD25TJ153 | R722 | |
| R17, 18 | ERD25TJ183 | R141 | ERX1ANJ8R2 | R344 | ERD25FJ122 | R553 | ERD25FJ681 | ERD25TJ183 | |
| R19, 20 | ERD25FJ822 | R142 | ERD25FJ222 | R345, 558 | ERD25FJ122 | R554 | ERD25FJ182 | R729 | |
| R21, 22 | ERD25TJ123 | R143 | ERD25FJ561 | R347 | ERD25FJ330 | R556 | ERD25FJ681 | R730 | |
| R23, 24 | ERD25TJ154 | R144 | ERD25FJ272 | R348 | ERD25FJ222 | R559 | ERD25FJ153 | R731 | |
| R25, 26 | ERD25TJ183 | R145 | ERD25FJ392 | R349 | ERD25FJ682 | R560, 561 | ERD25FJ562 | ERD25FJ272 | |
| R27, 28 | ERD25FJ121 | R146 | ERD25FJ472 | R401 | ERX1ANJ2R2 | R562 | ERD25TJ153 | ERD25FJ103 | |
| R29, 30 | ERD25FJ182 | R149 | ERD25FJ151 | R402 | ERG1ANJ471 | R563 | ERD25FJ182 | R734 | |
| R31, 32 | ERD25FJ472 | R150 | ERD25FJ821 | R403 | ERD25FJ472 | R564 | ERD25TJ153 | R735 | |
| R33, 34 | ERD25FJ182 | R151, 152 | ERD25TJ153 | R404 | ERD25FJ121 | R565 | ERD25FJ331 | R736 | |
| R35, 36 | ERD25FJ472 | R153, 154 | ERD25FJ682 | R405 | ERD25FJ272 | R566 | ERD25FJ182 | ERD25FJ472 | |
| R37, 38 | ERD25FJ562 | R155, 156 | ERD25TJ333 | R406 | ERD25FJ103 | R567, 568 | ERD25TJ473 | ERD25TJ104 | |
| R39, 40 | ERD25TJ224 | R157, 158 | ERD25TJ104 | R407 | ERD25FJ472 | R569 | ERD25FJ562 | ERD25FJ392 | |
| R41, 42 | ERD25TJ333 | R159 | ERD25FJ1R0 | R408 | ERD25FJ272 | R570 | ERD25FJ681 | ERD25FJ821 | |
| R43, 44 | ERD25FJ182 | R160 | ERD25TJ104 | R409 | ERD25TJ273 | R571 | ERD25FJ392 | ERD25FJ125 | |
| R45, 46 | ERD25FJ331 | R161 | ERD25TJ104 | R410, 411 | ERD25FJ102 | R572 | ERD25TJ123 | R741 | |
| R47, 48 | ERD25FJ821 | R162 | ERD25TJ104 | R412 | ERD25TJ153 | R573 | ERD25FJ472 | ERD25FJ102 | |
| R49, 50 | ERD25FJ683 | R163 | ERD25FJ1R0 | R413 | ERD25FJ471 | R574 | ERD25FJ182 | ERD25TJ273 | |
| R51, 52 | ERD25FJ821 | R164 | ERD25TJ153 | R414 | ERD25TJ473 | R575 | ERD25FJ562 | ERD25FJ821 | |
| R53, 54 | ERD25TJ104 | R165 | ERD25TJ333 | R415 | ERX1ANJ1R0 | R576 | ERD25FJ182 | ERD25FJ152 | |
| R55, 56 | ERD25FJ182 | R166 | ERD25TJ104 | R416 | ERG1ANJ681 | R577 | ERD25FJ151 | ERD25FJ152 | |
| R57, 58 | ERD25FJ271 | R167 | ERD25FJ391 | R417 | ERD25FJ391 | R578 | ERD25FJ182 | ERD25FJ478 | |
| R59, 60 | ERD25TJ184 | R168 | ERD25TJ154 | R418 | ERD25FJ221 | R579 | ERD25FJ182 | R801, 802 | |
| R61, 62 | ERD25FJ272 | R169 | ERD25TJ104 | R419 | ERD25FJ152 | R580, 593 | ERD25FJ331 | ERD25FJ121 | |
| R63, 64 | ERD25FJ331 | R170 | ERD25TJ273 | R420 | ERG1ANJ391 | R595 | ERD25FJ182 | ERD25FJ390 | |
| R65 | ERD25FJ222 | R171, 172 | ERD25TJ104 | R421 | ERD25FJ471 | R596 | ERD25FJ102 | R803, 804 | |
| R66 | ERD25FJ821 | R173 | ERD25TJ104 | R422, 423 | ERD25TJ153 | R601 | ERD25TJ153 | R805, 806 | |
| R67, 68 | ERD50FJ271 | R174 | ERD25TJ223 | R423 | ERD25FJ121 | R602 | ERD25FJ561 | R807, 808 | |
| R69, 70, 71, 72 | ERD25TJ224 | R175 | ERD25TJ274 | R424 | ERD25FJ471 | R603 | ERD25TJ153 | R809 | |
| R73, 74 | ERD25TJ273 | R176 | ERD25TJ274 | R425 | ERD25FJ471 | R604 | ERD25FJ122 | ERD25FJ681 | |
| R75, 76 | ERD25TJ123 | R177 | ERD25TJ473 | R426 | ERD50FJ220 | R605 | ERD25FJ221 | VARIABLE | |
| R77, 78 | ERD25FJ562 | R178 | ERD25FJ332 | R427 | ERD25FJ121 | R606 | ERD25FJ2R2 | RESISTORS | |
| R79, 80 | ERD25TJ153 | R179 | ERD25FJ102 | R428 | ERX1ANJ120 | R607 | ERD25FJ151 | VR1, 2 | |
| R81, 82 | ERD25FJ332 | R180 | ERD25FJ392 | R429 | ERQ1H180 | R608 | ERD25FJ102 | VR3, 4 | |
| R83, 84 | ERD25TJ333 | R181 | ERD25FJ102 | R430 | ERD50FJ220 | R609 | ERD25FJ103 | VR5, 6 | |
| R87, 88 | ERD25FJ682 | R182 | ERD25TJ105 | R431 | ERD25FJ562 | R610 | ERD25FJ2R2 | VR7, 8, 9, 10 | |
| R89, 90, 91, 92 | ERD25FJ121 | R183 | ERD25TJ153 | R432 | ERD25FJ101 | R611 | ERD25FJ221 | EVNKA4AA00B53 | |
| R93, 94 | ERD25FJ331 | R184 | ERD25FJ101 | R433 | ERD25FJ101 | R612 | ERD25FJ561 | VR13, 14 | |
| R95, 96 | ERD25FJ332 | R185 | ERD25FJ101 | R434 | ERD25FJ562 | R613 | ERD25FJ151 | EVNKA4AA00B54 | |
| R97, 98 | ERD25TJ333 | R186 | ERD25FJ472 | R435 | ERD25FJ101 | R614 | ERD25TJ153 | VR15, 16 | |
| R99, 100 | ERD25FJ821 | R187 | ERD25FJ103 | R436 | ERD25FJ562 | R615 | ERD25FJ122 | VR17 | |
| R101, 102 | ERD25TJ224 | R188 | ERD25FJ222 | R437 | ERD25FJ101 | R616 | ERD25FJ153 | VR18 | |
| R103, 104 | ERD25FJ562 | R189 | ERD25TJ333 | R438 | ERD25FJ562 | R617 | ERD25FJ682 | EVNKA4AA00B55 | |
| R105, 106, 107, 108 | ERD25FJ390 | R190 | ERD25FJ272 | R439 | ERD25FJ101 | R618 | ERD25TJ153 | VR201x2 | |
| R109, 110 | ERD25FJ152 | R191 | ERD25FJ560 | R440 | ERD25FJ101 | R619 | ERG1ANJ271 | EVNKOAA00B52 | |
| R111, 112 | ERD25FJ390 | R192 | ERD25FJ820 | R441 | ERD25FJ222 | R620 | ERD25FJ562 | VR202x2 | |
| R113, 114 | ERD25FJ562 | R193 | ERD25TJ153 | R442 | ERD25FJ471 | R621 | ERD25FJ331 | EVNKOAA00B54 | |
| R121, 122 | ERD25FJ472 | R194 | ERD25TJ223 | R443 | ERD25FJ222 | R622 | ERD25FJ682 | VR301, 302 | |
| R123, 124 | ERD25FJ152 | R195 | ERD25TJ823 | R444 | ERD25FJ471 | R623 | ERD25TJ153 | VR303, 304 | |
| R125 | ERD25FJ821 | R196 | ERD25TJ333 | R445 | ERD25TJ153 | R624 | ERG1ANJ271 | EVNKA4AA00B14 | |
| R126 | ERD25FJ272 | R197 | ERD25FJ102 | R446 | ERD25FJ562 | R625 | ERD25FJ562 | EVNKA4AA00B14 | |
| R127 | ERD25FJ562 | R198 | ERD25TJ333 | R447 | ERD25FJ562 | R626 | ERD25FJ102 | EVNKA4AA00B54 | |
| | | R199 | ERD25FJ821 | R448 | ERD25TJ104 | R627 | ERD25TJ473 | EVNKA4AA00B52 | |
| | | R200 | ERD25FJ330 | R449 | ERD25FJ222 | R628 | ERD25TJ122 | CAPACITORS | |
| | | R201 | ERD25TJ154 | R450 | ERD25TJ153 | R629 | ERD25FJ122 | ECCD1H181K | |
| | | R202 | ERD25FJ681 | R451 | ERD25TJ153 | R630 | ERD25FJ562 | C5, 6 | |
| | | R203 | ERD25TJ274 | R452 | ERD25TJ102 | R631 | ERD25FJ682 | ECEA1HS100 | |
| | | R204 | ERD25TJ224 | R453 | ERD25FJ562 | R632 | ERD25FJ562 | ECEA1HS00B52 | |
| | | R205 | ERD25TJ333 | R454 | ERD25FJ562 | R633 | ERD25FJ153 | ECEA1HS100B53 | |
| | | R206 | ERD25TJ154 | R455 | ERD25TJ473 | R634 | ERG1ANJ271 | ECEA1HS100B54 | |
| | | R207 | ERD25FJ823 | R456 | ERD25TJ104 | R635 | ERD25FJ562 | VR305 | |
| | | R208 | ERD25FJ330 | R457 | ERD25TJ222 | R636 | ERD25FJ562 | VR401, 701, 702 | |
| | | R209 | ERD25TJ154 | R458 | ERD25TJ153 | R637 | ERD25FJ562 | ECCD1H181K | |
| | | R210 | ERD25TJ681 | R459 | ERD25TJ102 | R638 | ERD25FJ272 | C7, 8 | |
| | | R211 | ERD25FJ332 | R460 | ERD25FJ563 | R639 | ERD25FJ103 | ECEA1HS100 | |
| | | R212 | ERD25FJ282 | R461 | ERD25FJ562 | R640 | ERD50FJ181 | ECEA25M4R7 | |
| | | R213 | ERD25FJ102 | R462 | ERD25FJ101 | R641 | ERD25FJ272 | ECFCW102KVY | |
| | | R214 | ERD25FJ392 | R463 | ERD25FJ122 | R642 | ERD25FJ103 | ECEA1AS101 | |
| | | R215 | ERD25FJ102 | R464 | ERD25FJ102 | R643 | ERD25FJ272 | ECEA1AS470 | |
| | | R216 | ERD25TJ105 | R465 | ERD25FJ562 | R644 | ERD25FJ272 | ECCD1H470K | |
| | | R217 | ERD25TJ153 | R466 | ERD25TJ104 | R645 | ERD25TJ153 | ECQM05102KZ | |
| | | R218 | ERD25FJ101 | R467 | ERD50FJ4R7 | R646 | ERD25FJ102 | ECQM05223KZ | |
| | | R219 | ERD25FJ472 | R468 | ERD25FJ101 | R647 | ERD25FJ562 | ECKD1H471K | |
| | | R220 | ERD25FJ102 | R469 | ERD25FJ101 | R648 | ERD25FJ562 | ECEA50MR47 | |
| | | R221 | ERD25TJ222 | R470 | ERD25FJ101 | R649 | ERD25FJ562 | ECEA1HS100 | |
| | | R222 | ERD25TJ332 | R471 | ERD25FJ101 | R650 | ERD25FJ103 | ECEA1S570 | |
| | | R223 | ERD25TJ274 | R472 | ERD25FJ101 | R651 | ERD25FJ562 | ECEA1HS100 | |
| | | R224 | ERD25TJ154 | R473 | ERD25FJ101 | R652 | ERD25FJ562 | ECEA1HS100 | |
| | | R225 | ERD25TJ333 | R474 | ERD25FJ101 | R653 | ERD25FJ562 | ECEA1HS100 | |
| | | R226 | ERD25FJ272 | R475 | ERD25FJ101 | R654 | ERD25FJ562 | ECEA1HS100 | |
| | | R227 | ERD25FJ102 | R476 | ERD25FJ101 | R655 | ERD25FJ562 | ECEA1HS100 | |
| | | R228 | ERD25FJ560 | R477 | ERD25FJ101 | R656 | ERD25FJ562 | ECEA1HS100 | |
| | | R229 | ERD25FJ820 | R478 | ERD25FJ222 | R657 | ERD25FJ682 | ECEA1HS100 | |
| | | R230 | ERD25TJ153 | R479 | ERD25FJ473 | R658 | ERD25FJ102 | ECEA1HS100 | |
| | | R231 | ERD25TJ232 | R480 | ERD25TJ153 | R659 | ERD25FJ562 | ECEA1HS100 | |
| | | R232 | ERD25TJ274 | R481 | ERD25TJ153 | R660 | ERD25FJ562 | ECEA1HS100 | |
| | | R233 | ERD25TJ224 | R482 | ERD25TJ153 | R661 | ERD25FJ562 | ECEA1HS100 | |
| | | R234 | ERD25TJ154 | R483 | ERD25TJ473 | R662 | ERD25FJ102 | ECEA1HS100 | |
| | | R235 | ERD25FJ316 | R484 | ERD25TJ154 | R663 | ERD25FJ562 | ECEA1HS100 | |
| | | R236 | ERD25TJ154 | R485 | ERD25TJ474 | R664 | ERD25TJ153 | ECEA1HS100 | |
| | | R237 | ERD25FJ821 | R486 | ERD25FJ101 | R665 | ERD25FJ102 | ECEA1HS100 | |
| | | R238 | ERD25FJ330 | R487 | ERD25FJ101 | R666 | ERD25FJ102 | ECEA1HS100 | |
| | | R239 | ERD25TJ154 | R488 | ERD25FJ101 | R667 | ERD25FJ562 | ECEA1HS100 | |
| | | R240 | ERD25FJ681 | R489 | ERD25FJ101 | R668 | ERD25FJ562 | ECEA1HS100 | |
| | | R241 | ERD25FJ272 | R490 | ERD25FJ101 | R669 | ERD25FJ562 | ECEA1HS100 | |
| | | R242 | ERD25FJ154 | R491 | ERD25FJ101 | R670 | ERD25FJ562 | ECEA1HS100 | |
| | | R243 | ERD25FJ392 | R492 | ERD25FJ101 | R671 | ERD25FJ562 | ECEA1HS100 | |
| | | R244 | ERD25FJ102 | R493 | ERD25FJ102 | R672 | ERD25FJ562 | ECEA1HS100 | |
| | | R245 | ERD25FJ562 | R494 | ERD25FJ102 | R673 | ERD25FJ562 | ECEA1HS100 | |
| | | R246 | ERD25TJ153 | R495 | ERD25FJ102 | R674 | ERD25FJ562 | ECEA1HS100 | |
| | | R247 | ERD25FJ823 | R496 | ERD25FJ102 | R675 | ERD25FJ562 | ECEA1HS100 | |
| | | R248 | ERD25FJ330 | R497 | ERD25FJ102 | R676 | ERD25FJ562 | ECEA1HS100 | |
| | | R249 | ERD25TJ154 | R498 | ERD25FJ102 | R677 | ERD25FJ562 | ECEA1HS100 | |
| | | R250 | ERD25FJ681 | R499 | ERD25FJ102 | R678 | ERD25FJ562 | ECEA1HS100 | |
| | | R251 | ERD25FJ272 | R500 | ERD25FJ102 | R679 | ERD25FJ562 | ECEA1HS100 | |
| | | R252 | ERD25FJ154 | R501 | ERD25FJ102 | R680 | ERD25FJ562 | ECEA1HS100 | |
| | | R253 | ERD25FJ333 | R502 | ERD25FJ102 | R681 | ERD25FJ562 | ECEA1HS100 | |
| | | R254 | ERD25TJ154 | R503 | ERD25FJ102 | R682 | ERD25FJ562 | ECEA1HS100 | |
| | | R255 | ERD25FJ821 | R504 | ERD25FJ102 | R683 | ERD25FJ562 | ECEA1HS100 | |
| | | R256 | ERD25TJ330 | R505 | ERD25FJ102 | R684 | ERD25FJ562 | ECEA1HS100 | |
| | | R257 | ERD25TJ154 | R506 | ERD25FJ102 | R685 | ERD25FJ562 | ECEA1HS100 | |
| | | R258 | ERD25FJ681 | R507 | ERD25FJ102 | R686 | ERD25FJ562 | ECEA1HS100 | |
| | | R259 | ERD25FJ272 | | | | | | |

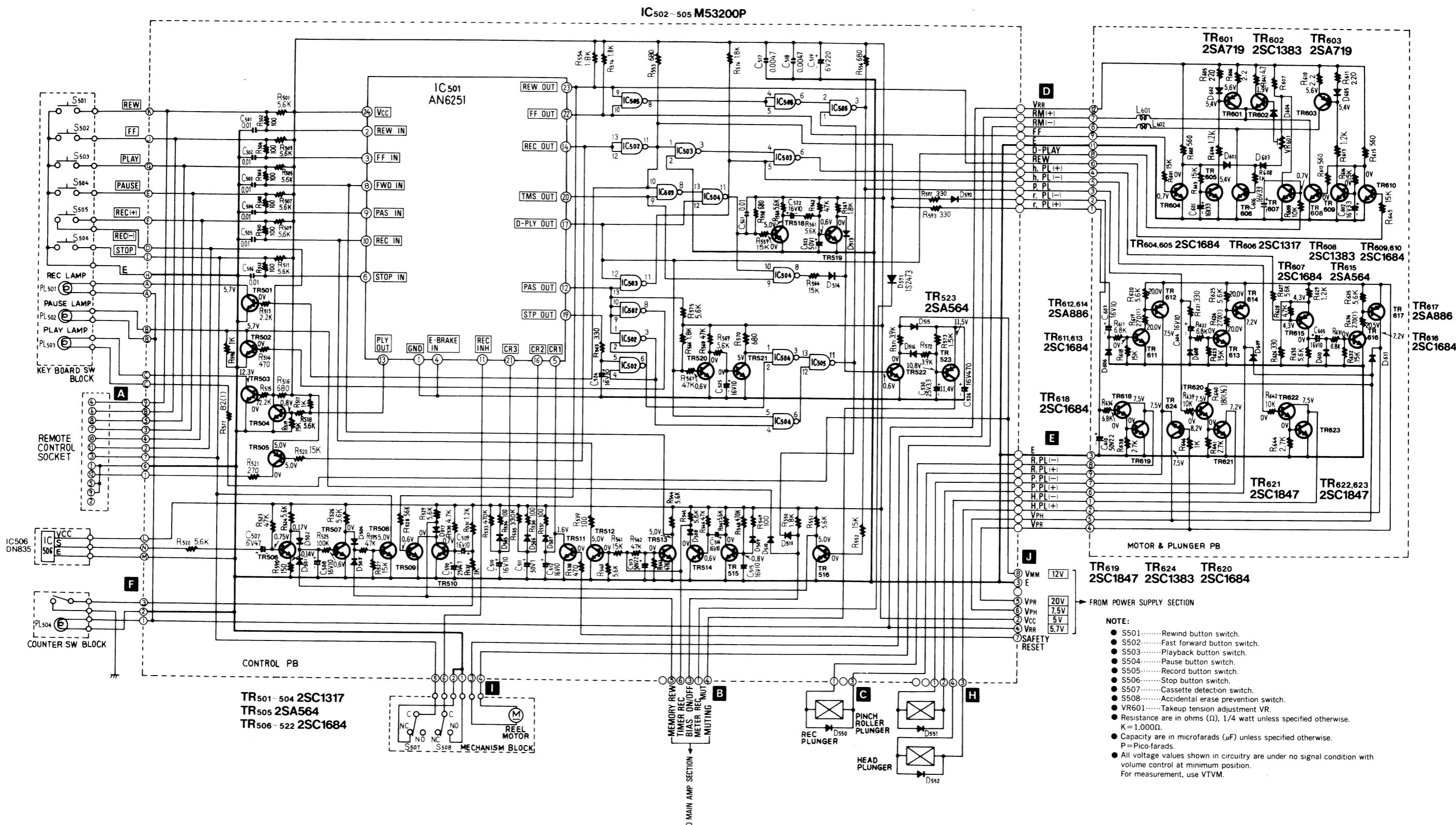
SCHEMATIC DIAGRAM

Main Control Section

| Ref. No. | Part No. | Ref. No. | Part No. | Ref. No. | Part No. | Ref. No. | Part No. |
|-----------------|-------------|----------------|-------------|---------------------------------|--------------------------|--------------------------------|-------------------------------|
| C41, 42 | ECCD1H220K | C509 | ECEA1HS100 | Tr309, 310 | 2SC1383 | D411 | △ RVD10DC4 |
| C43, 44 | ECEA1VS330 | C510 | ECEA16Z10 | Tr311, 312 | 2SC945 | D412 | △ RVD10DC4R |
| C47, 48 | ECEA1HS100 | C511 | ECEA50Z1 | Tr313, 314, 315 | 2SC1383 | D413 | SM12 |
| C49, 50 | ECQM05102KZ | C512 | ECEA16Z10 | Tr401 | 2SC1226 | D414 | △ RVD10DC4R |
| C51, 52 | ECCD1H271K | C513 | ECEA50Z2R2 | Tr402, 403, 404, 405 | 2SC1684 | D414 | MV121 |
| C53, 54 | ECEA1JS4R7 | C514 | ECEA16N10 | Tr406 | 2SA564 | D415 | △ RVD10DC4 |
| C55, 56 | ECEA1HS100 | C515 | ECEA1HS100 | Tr408, 409 | 2SD389 | D501, 502, 503, 504, 505, 506, | 507, 508 |
| C57, 58 | ECEA50Z168 | C517, 518 | ECKD1H472KB | Tr501, 502, 503 | MA150 | D509 | OA91 |
| C59, 60 | ECEA25M4R7 | C519 | ECEA1AS221 | Tr504 | 2SC1317 | D510, 511, 513, 514 | 515, 516 |
| C61, 62 | ECKD1H102K | C521 | ECKD1H103ZF | Tr504 | 2SC1684 | D515 | SM12 |
| C63, 64 | ECQM05393KZ | C522 | ECEA16Z10 | Tr506, 507, 508, 509, 510, 511, | D516 | MA150 | 512, 513, 514, 515, 516, 518, |
| C67, 68 | ECQM05273KZ | C523 | ECEA50Z1 | Tr506, 507, 508, 509, 510, 511, | D517 | MA150 | 512, 513, 514, 515, 516, 518, |
| C69, 70 | ECQM05683KZ | C524, 525 | ECEA1HS100 | Tr506, 507, 508, 509, 510, 511, | D518 | MA150 | 512, 513, 514, 515, 516, 518, |
| C71, 72, 73, 74 | ECQM05273KZ | C526 | ECEA1CS471 | Tr506, 507, 508, 509, 510, 511, | D601, 602, 603, 604, 605 | D606, 608 | MA150 |
| C75, 76 | ECQM05123KZ | C530 | ECEA50Z4R7 | Tr506, 507, 508, 509, 510, 511, | D609 | OA90M | SM112 |
| C77, 78 | ECQM05102KZ | C590 | ECEA1JS4R7 | Tr506, 507, 508, 509, 510, 511, | D610 | SM112 | 512, 513, 514, 515, 516, 518, |
| C79, 80 | ECQS1561JZ | C601, 602 | ECEA1CS330 | Tr506, 507, 508, 509, 510, 511, | D611 | MA150 | 512, 513, 514, 515, 516, 518, |
| C81, 82 | ECCD1H1680K | C603, 604, 605 | ECEA16Z10 | Tr506, 507, 508, 509, 510, 511, | D702 | MA150 | 512, 513, 514, 515, 516, 518, |
| C83 | ECQF4123KZ | C606 | ECEA16Z33 | Tr506, 507, 508, 509, 510, 511, | D703 | MA1120 | 512, 513, 514, 515, 516, 518, |
| C84 | ECQM05473KZ | C606 | ECEA16Z10 | Tr506, 507, 508, 509, 510, 511, | D609 | OA90M | SM112 |
| C85 | ECEA50Z1 | C606 | ECEA16Z33 | Tr506, 507, 508, 509, 510, 511, | D609 | SM112 | 512, 513, 514, 515, 516, 518, |
| C86 | ECQF4103KZH | C606 | ECEA16Z33 | Tr506, 507, 508, 509, 510, 511, | D609 | OA90M | SM112 |
| C87 | ECKD1H471K | C610 | ECEA50Z2R2 | Tr506, 507, 508, 509, 510, 511, | D609 | SM112 | 512, 513, 514, 515, 516, 518, |
| C88 | ECEA1JS4R7 | C701, 702, 703 | ECEA25Z3R3 | Tr506, 507, 508, 509, 510, 511, | D609 | MA150 | 512, 513, 514, 515, 516, 518, |
| C89 | ECEA1VS471 | C704 | ECEA50Z4R7 | Tr506, 507, 508, 509, 510, 511, | D609 | MA150 | 512, 513, 514, 515, 516, 518, |
| C90 | ECEA1VS221 | C705, 706, 707 | ECEA16Z33 | Tr506, 507, 508, 509, 510, 511, | D609 | MA1120 | 512, 513, 514, 515, 516, 518, |
| C91 | ECEA1VS471 | C705, 706, 707 | ECEA16Z33 | Tr506, 507, 508, 509, 510, 511, | D609 | OA90M | SM112 |
| C92 | ECCD1H101K | C708 | ECEA50Z2R2 | Tr506, 507, 508, 509, 510, 511, | D609 | SM112 | 512, 513, 514, 515, 516, 518, |
| C93 | ECKD1H102K | C709 | ECEA50Z3KZ | Tr506, 507, 508, 509, 510, 511, | D609 | MA150 | 512, 513, 514, 515, 516, 518, |
| C94 | ECEA25Z3R3 | C710 | ECEA50Z3KZ | Tr506, 507, 508, 509, 510, 511, | D609 | MA150 | 512, 513, 514, 515, 516, 518, |
| C95, 96 | ECEA50Z1 | C712 | ECEA25Z3R3 | Tr506, 507, 508, 509, 510, 511, | D609 | MA150 | 512, 513, 514, 515, 516, 518, |
| C97, 98 | ECCD1H101K | C713 | ECEA25Z100 | Tr506, 507, 508, 509, 510, 511, | D609 | MA150 | 512, 513, 514, 515, 516, 518, |
| C99, 100 | ECQM05333KZ | C714 | ECQM05393KZ | Tr506, 507, 508, 509, 510, 511, | D609 | OA90M | SM112 |
| C101 | ECEA1ES470 | C715 | ECQM05683KZ | Tr506, 507, 508, 509, 510, 511, | D609 | SM112 | 512, 513, 514, 515, 516, 518, |
| C103, 104 | ECQM05472KZ | C716 | ECQM05104KZ | Tr506, 507, 508, 509, 510, 511, | D609 | MA150 | 512, 513, 514, 515, 516, 518, |
| C107, 108 | ECKD1H102K | C717 | ECQM05103KZ | Tr506, 507, 508, 509, 510, 511, | D609 | MA150 | 512, 513, 514, 515, 516, 518, |
| C201x2 | ECEA25Z4R7 | C718 | ECQM05223KZ | Tr506, 507, 508, 509, 510, 511, | D609 | MA150 | 512, 513, 514, 515, 516, 518, |
| C202x2 | ECEA1HS100 | C719 | ECEA50Z2R2 | Tr506, 507, 508, 509, 510, 511, | D609 | MA150 | 512, 513, 514, 515, 516, 518, |
| C203x2 | ECEA25Z4R7 | C720 | ECEA50Z2R2 | Tr506, 507, 508, 509, 510, 511, | D609 | MA150 | 512, 513, 514, 515, 516, 518, |
| C204x2 | ECEA5562KZ | C721 | ECEA50Z2R2 | Tr506, 507, 508, 509, 510, 511, | D609 | MA150 | 512, 513, 514, 515, 516, 518, |
| C205x2 | ECEA50Z4R7 | C722 | ECEA50Z2R2 | Tr506, 507, 508, 509, 510, 511, | D609 | MA150 | 512, 513, 514, 515, 516, 518, |
| C206x2 | ECQM05273KZ | C723 | ECEA50Z2R2 | Tr506, 507, 508, 509, 510, 511, | D609 | MA150 | 512, 513, 514, 515, 516, 518, |
| C207x2 | ECEA1HS100 | C724 | ECEA50Z2R2 | Tr506, 507, 508, 509, 510, 511, | D609 | MA150 | 512, 513, 514, 515, 516, 518, |
| C208x2 | ECEA50MR1 | C725 | ECEA50Z2R2 | Tr506, 507, 508, 509, 510, 511, | D609 | MA150 | 512, 513, 514, 515, 516, 518, |
| C209x2 | ECEA1ES470 | C726 | ECEA50Z2R2 | Tr506, 507, 508, 509, 510, 511, | D609 | MA150 | 512, 513, 514, 515, 516, 518, |
| C210x2 | ECEA1VS471 | C727 | ECEA50Z2R2 | Tr506, 507, 508, 509, 510, 511, | D609 | MA150 | 512, 513, 514, 515, 516, 518, |
| C211x2 | ECEA1HS100 | C730 | ECEA50Z2R2 | Tr506, 507, 508, 509, 510, 511, | D609 | MA150 | 512, 513, 514, 515, 516, 518, |
| C212x2 | ECEA16Z33 | C731, 732, 733 | ECEA16Z33 | Tr506, 507, 508, 509, 510, 511, | D609 | MA150 | 512, 513, 514, 515, 516, 518, |
| C213x2 | ECEA50Z33 | C734 | ECEA16Z33 | Tr506, 507, 508, 509, 510, 511, | D609 | MA150 | 512, 513, 514, 515, 516, 518, |
| C214x2 | ECEA1HS100 | C801, 802 | ECEA16Z33 | Tr506, 507, 508, 509, 510, 511, | D609 | MA150 | 512, 513, 514, 515, 516, 518, |
| C215x2 | ECEA50Z1 | C803, 804 | ECEA50Z2R2 | Tr506, 507, 508, 509, 510, 511, | D609 | MA150 | 512, 513, 514, 515, 516, 518, |
| C216x2 | ECEA50Z1 | C805, 806 | ECEA50Z2R2 | Tr506, 507, 508, 509, 510, 511, | D609 | MA150 | 512, 513, 514, 515, 516, 518, |
| C301, 302 | ECEA1HS100 | C807, 808 | ECEA50Z2R2 | Tr506, 507, 508, 509, 510, 511, | D609 | MA150 | 512, 513, 514, 515, 516, 518, |
| C303, 304 | ECEA50Z33 | C809, 810 | ECEA50Z2R2 | Tr506, 507, 508, 509, 510, 511, | D609 | MA150 | 512, 513, 514, 515, 516, 518, |
| C305, 306 | ECEA1HS100 | C811, 812 | ECEA50Z2R2 | Tr506, 507, 508, 509, 510, 511, | D609 | MA150 | 512, 513, 514, 515, 516, 518, |
| C307, 308 | ECEA16Z33 | C813, 814 | ECEA16Z33 | Tr506, 507, 508, 509, 510, 511, | D609 | MA150 | 512, 513, 514, 515, 516, 518, |
| C309, 310 | ECEA25Z4R7 | C815, 816 | ECEA16Z33 | Tr506, 507, 508, 509, 510, 511, | D609 | MA150 | 512, 513, 514, 515, 516, 518, |
| C311, 312 | ECEA1HS100 | C817, 818 | ECEA16Z33 | Tr506, 507, 508, 509, 510, 511, | D609 | MA150 | 512, 513, 514, 515, 516, 518, |
| C313, 314 | ECCD1H101K | C819, 820 | ECEA16Z33 | Tr506, 507, 508, 509, | | | |

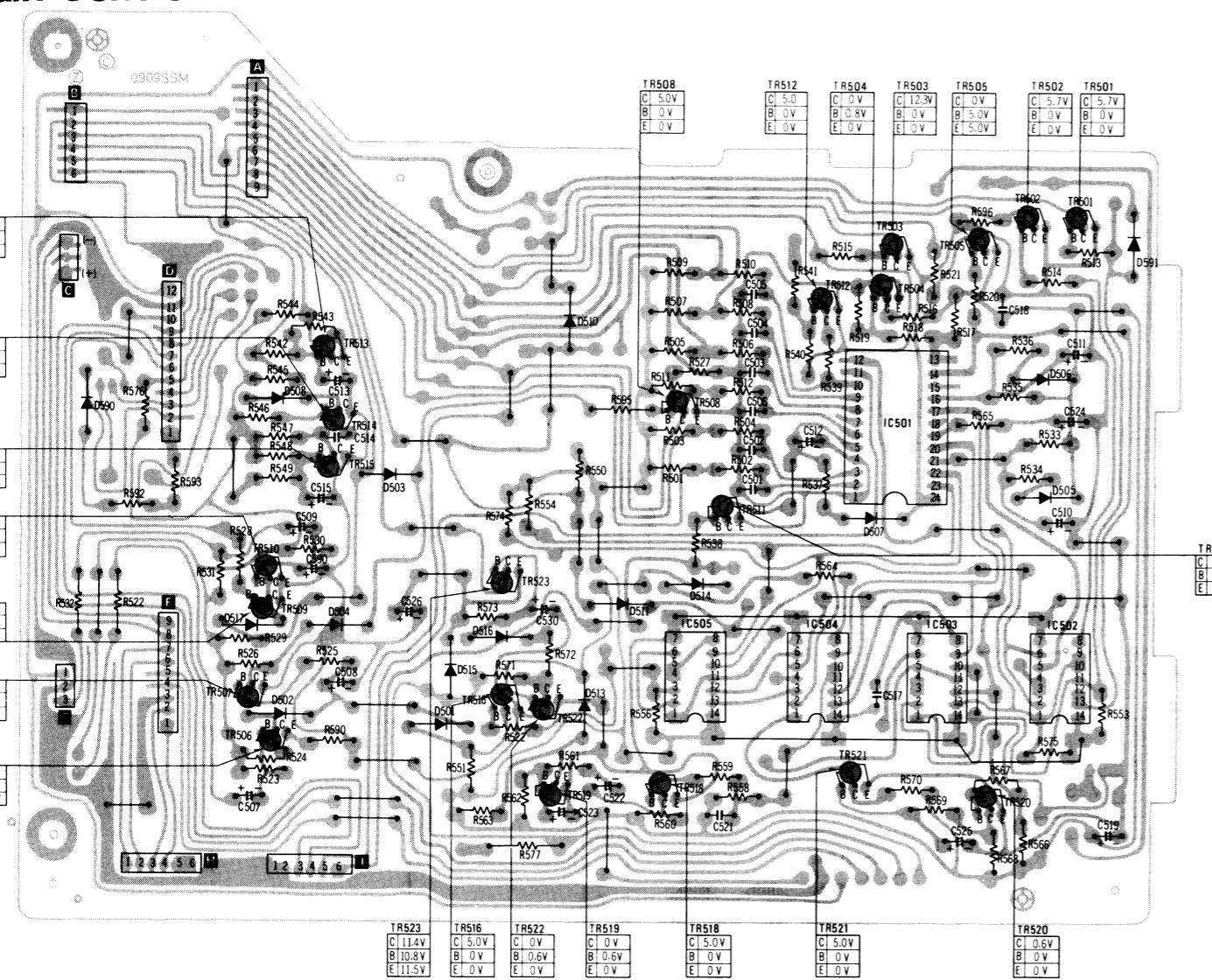
SCHEMATIC DIAGRAM

Main Control Section

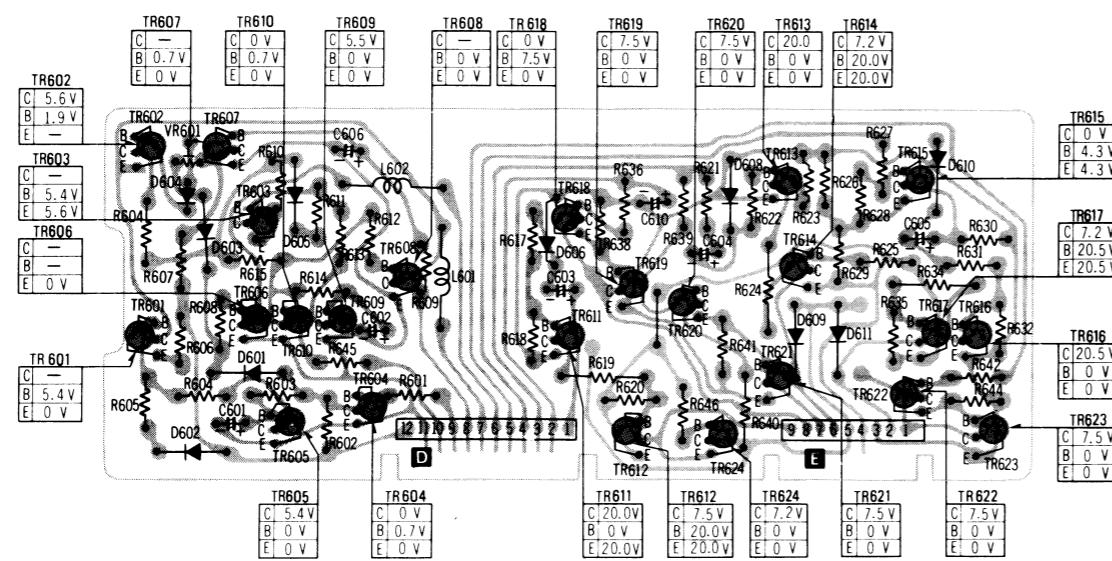


CIRCUIT BOARD

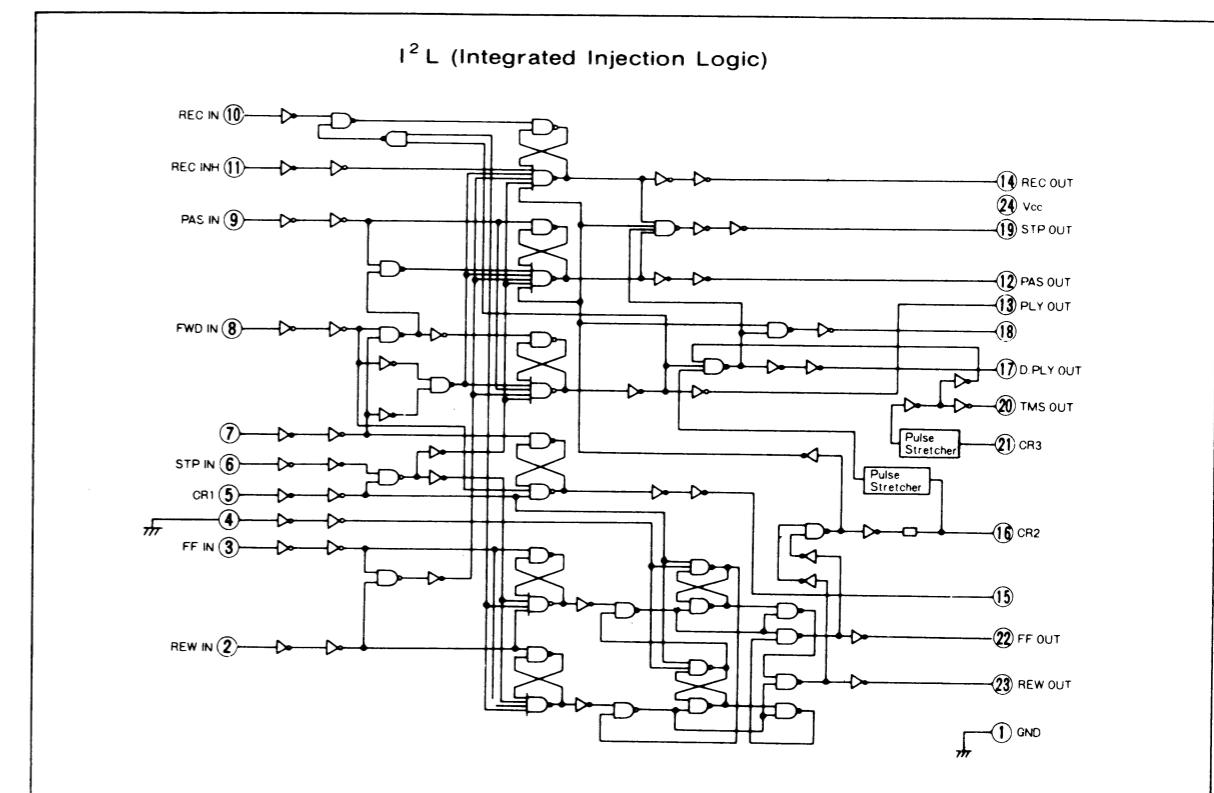
Main Control



Plunger Driving



IC (AN6251) equivalent circuitry

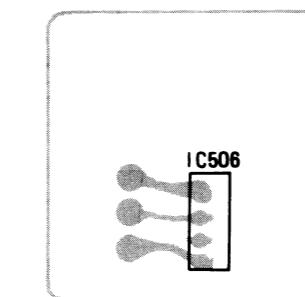


Relationship of each operation mode with input/output

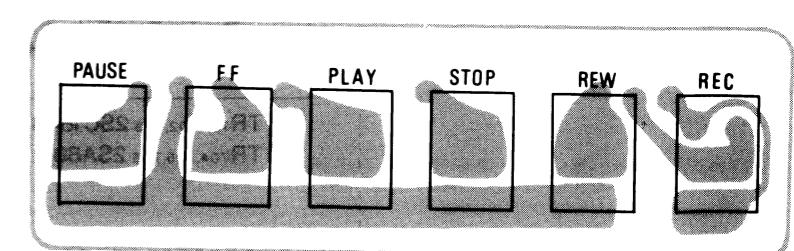
| Operation mode | Input terminal | IC (AN6251) | | | | | | | |
|----------------|----------------|----------------|---------------|--------------|-----------------|---------------|--------------|-------------|--------------|
| | | (12) PAUSE OUT | (13) PLAY OUT | (14) REC OUT | (17) D-PLAY OUT | (19) STOP OUT | (20) TMS OUT | (22) FF OUT | (23) REW OUT |
| REW | (2) REW IN | H | H | H | H | H | H | L | L |
| FF | (3) FF IN | H | L | H | H | H | H | L | H |
| PLAY | (8) FWD IN | H | L | H | *L | H | H | H | H |
| PAUSE | (9) PAS IN | L | H | H | H | H | H | H | H |
| REC | (10) REC IN | H | H | L | H | H | H | H | H |
| STOP | (6) STOP IN | H | H | H | H | L | H | H | H |

* Doesn't become "L" immediately even if playback button pushed; becoming "L" after a slight delay.

Hall IC

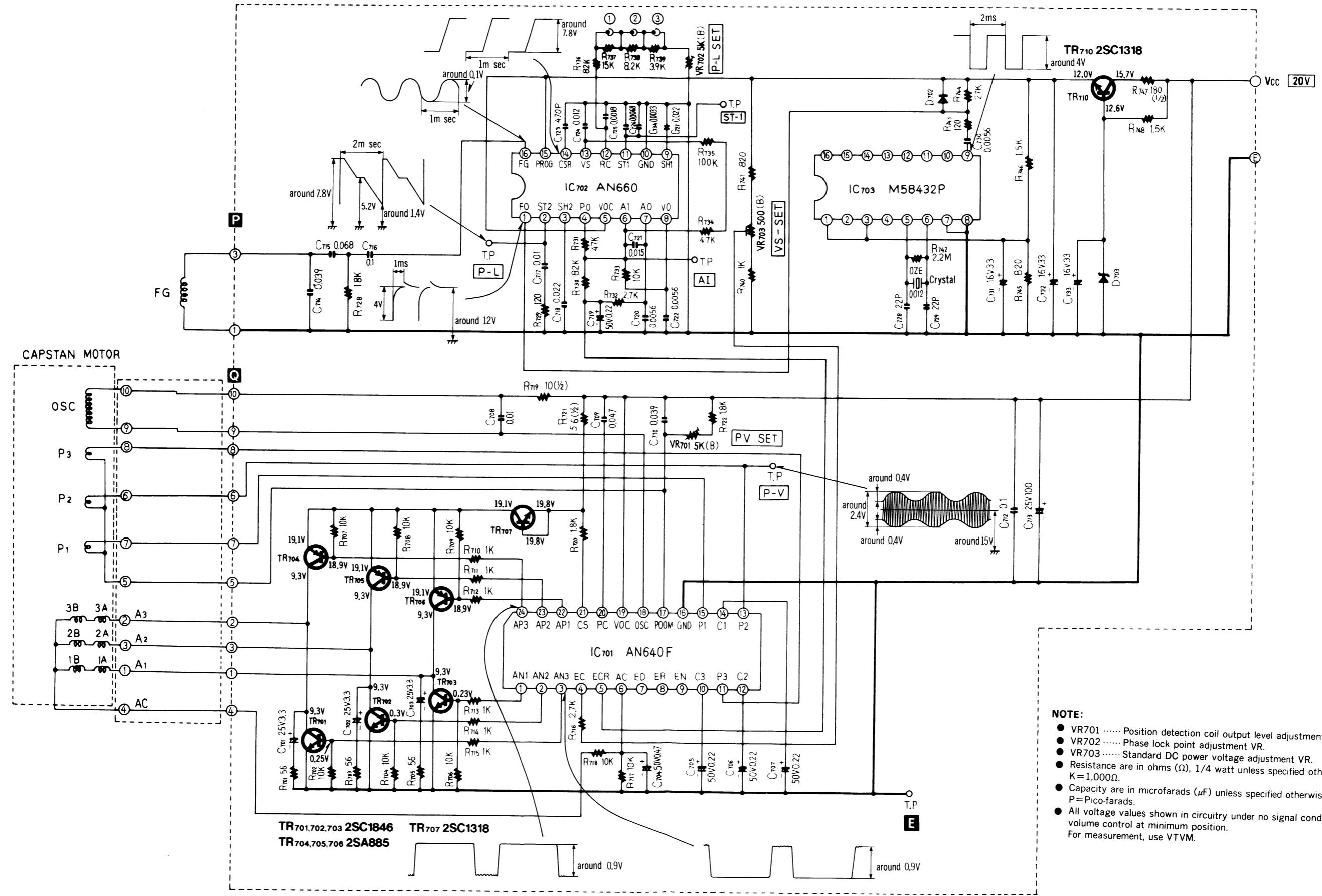


Control Key Switch



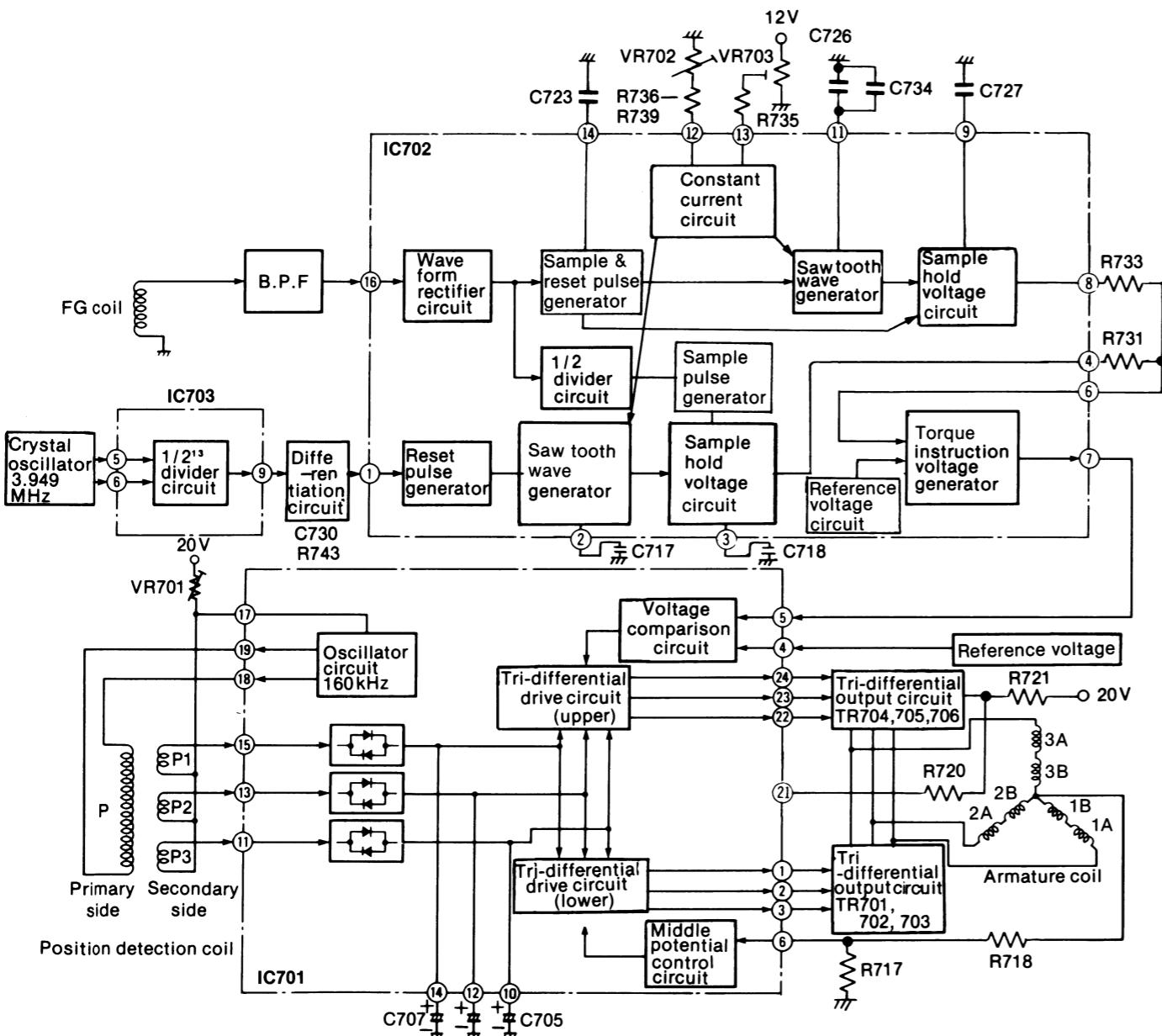
SCHEMATIC DIAGRAM

Capstan Driving Section



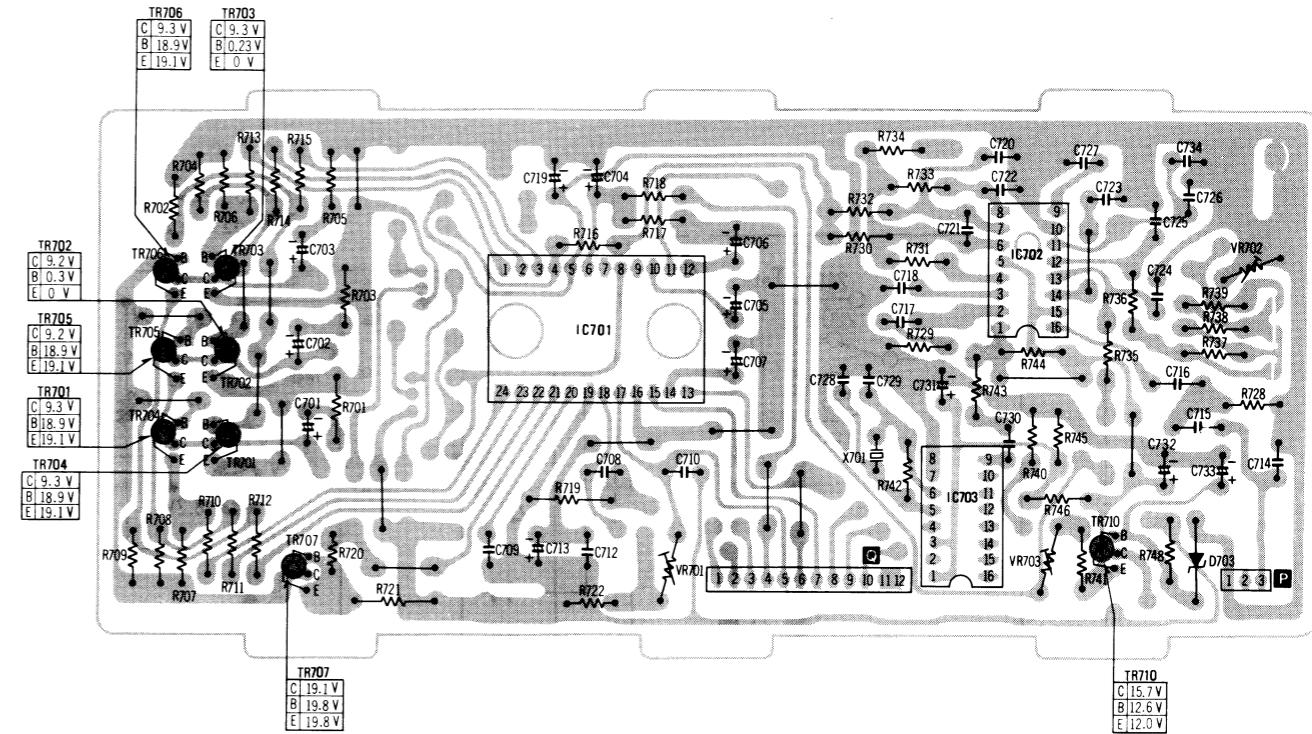
BLOCK DIAGRAM

Capstan Motor Section

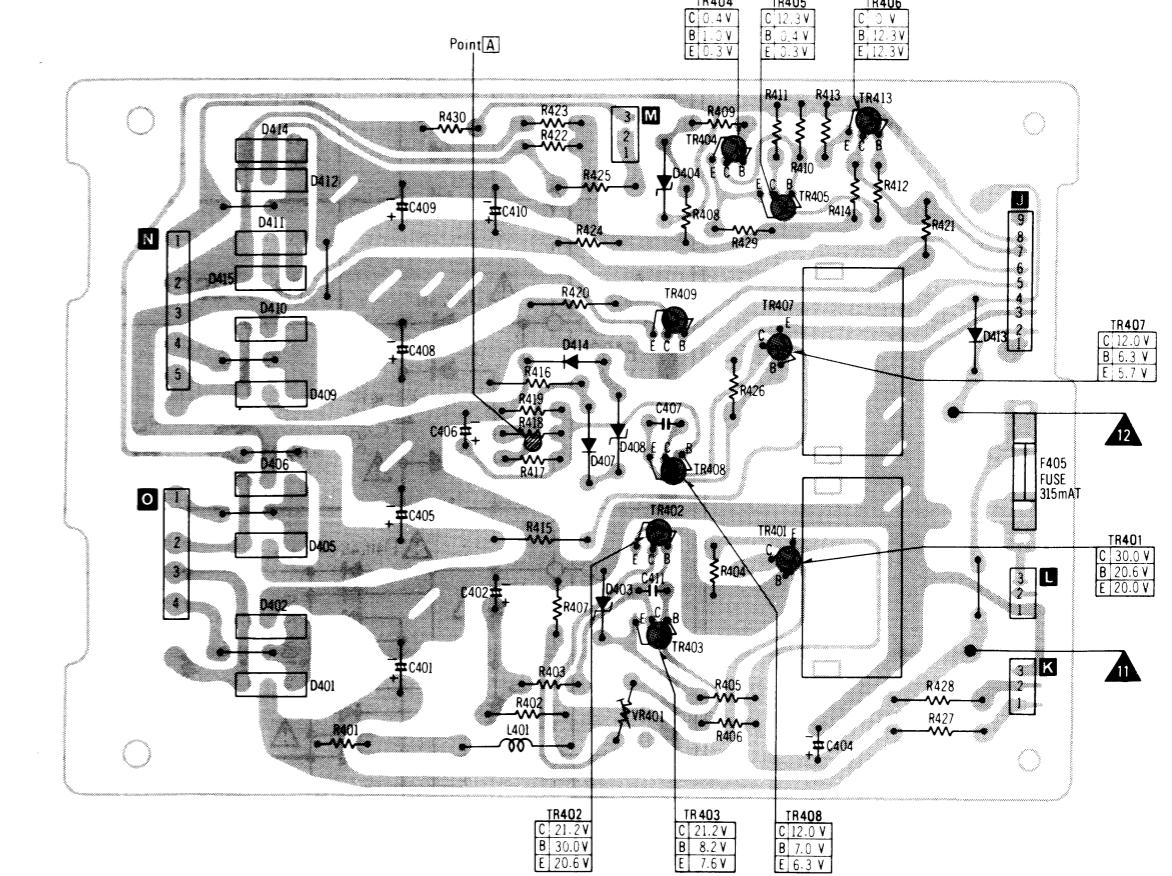


CIRCUIT BOARD

Capstan Driving



Power Supply

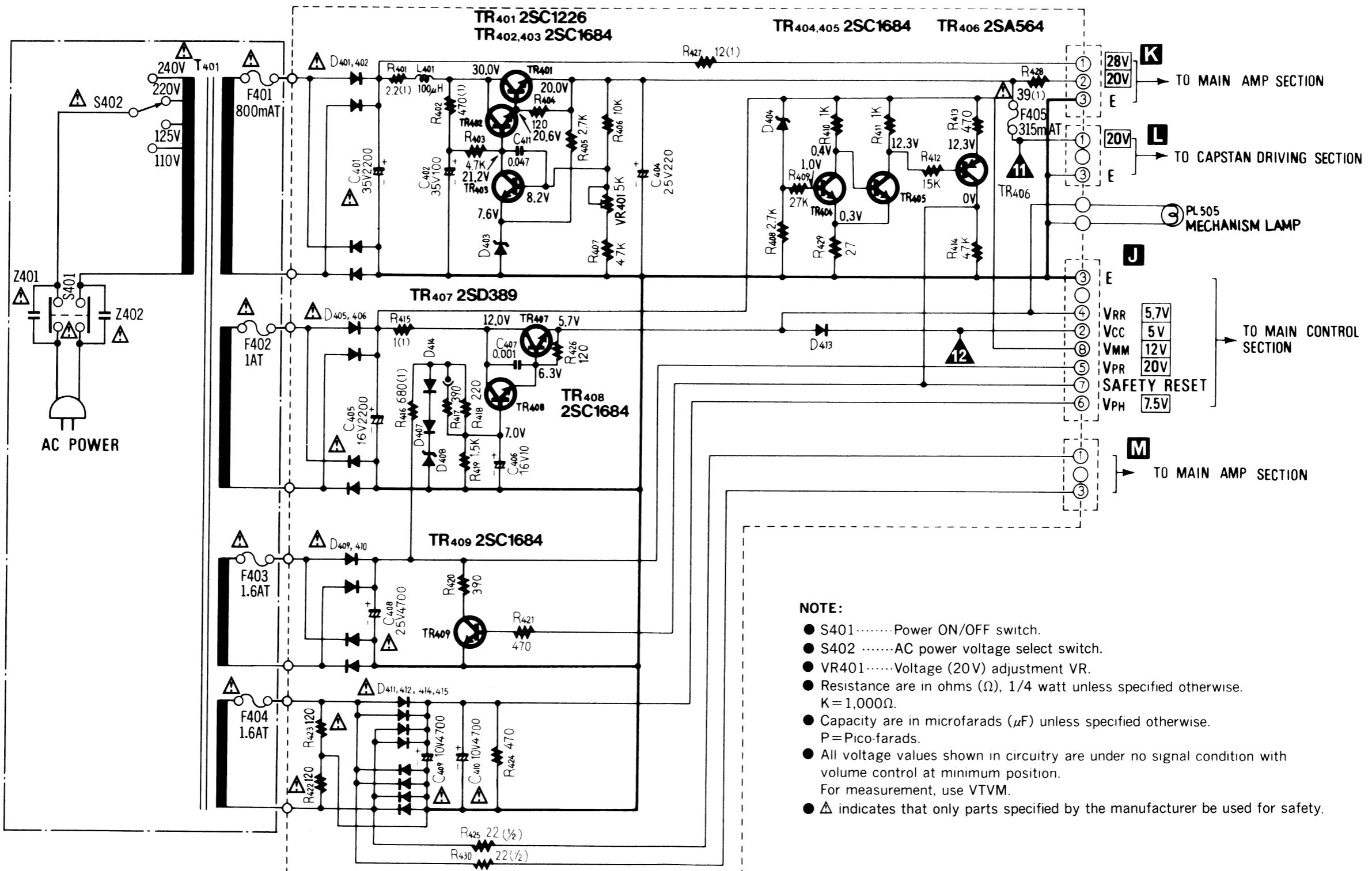


NOTE:

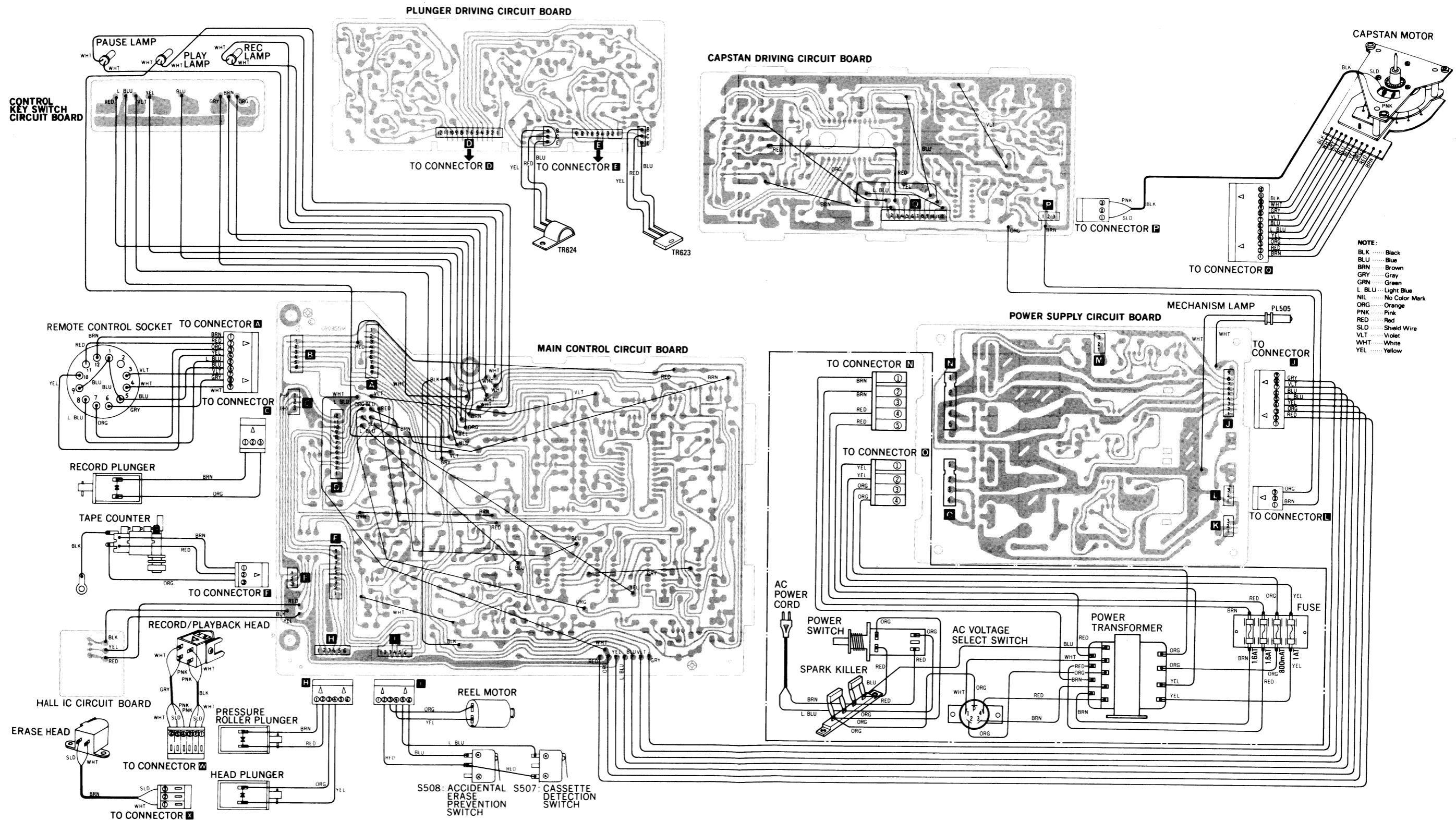
The circuit shown in red on the conductor is B circuit.
Values indicated in are DC voltage between the chassis and electrical parts.

SCHEMATIC DIAGRAM

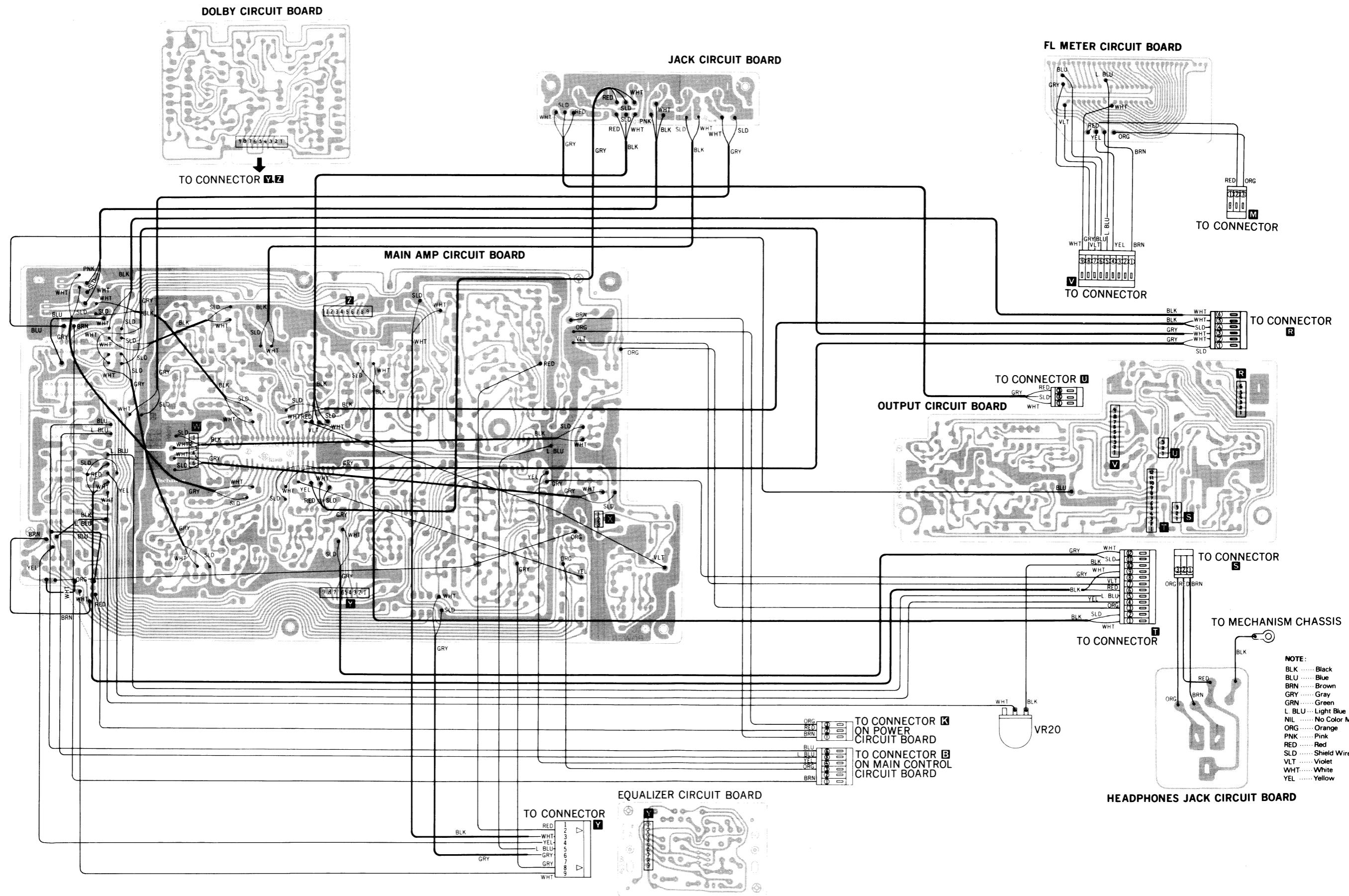
Power Supply Section



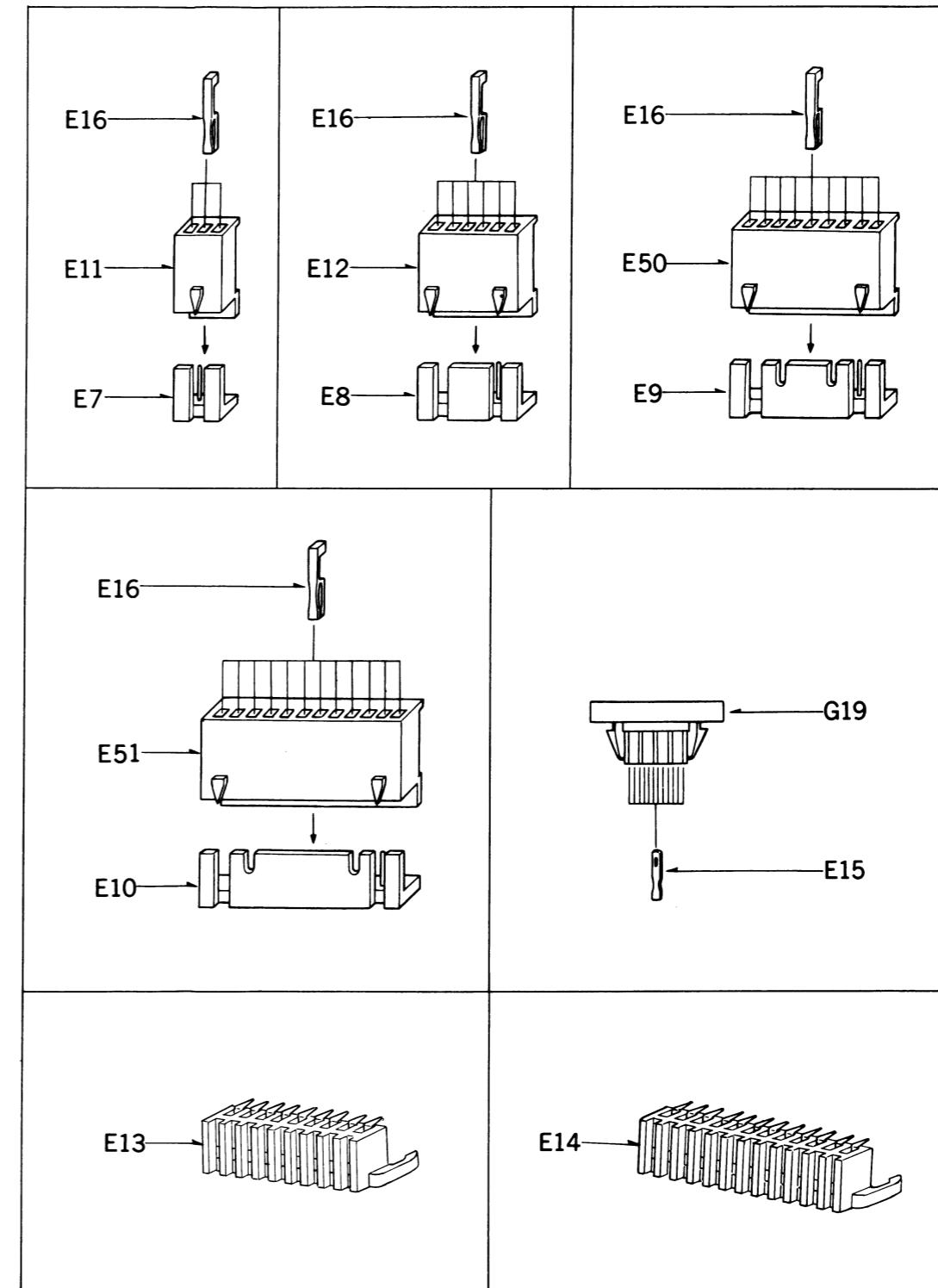
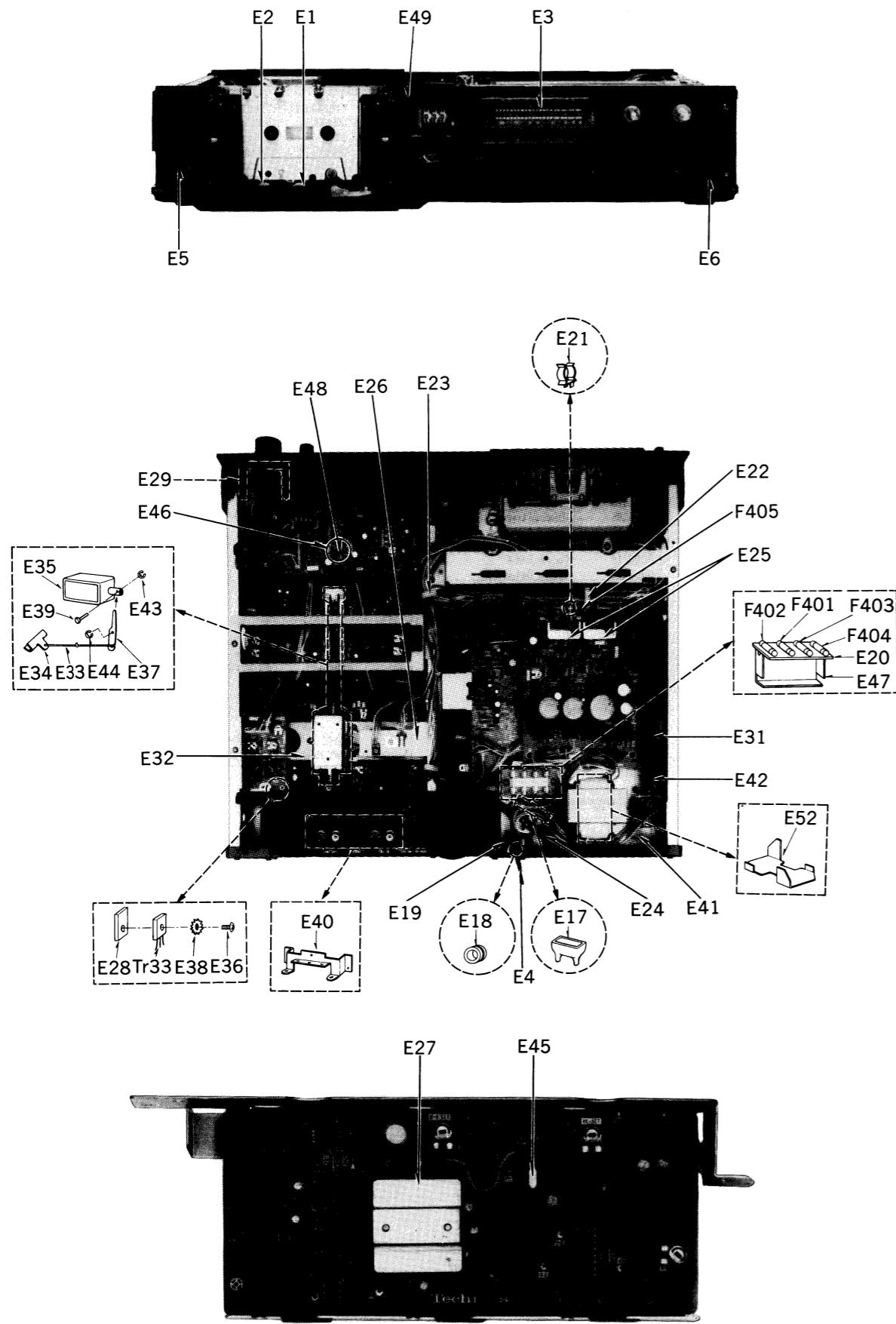
WIRING CONNECTION DIAGRAM



WIRING CONNECTION DIAGRAM



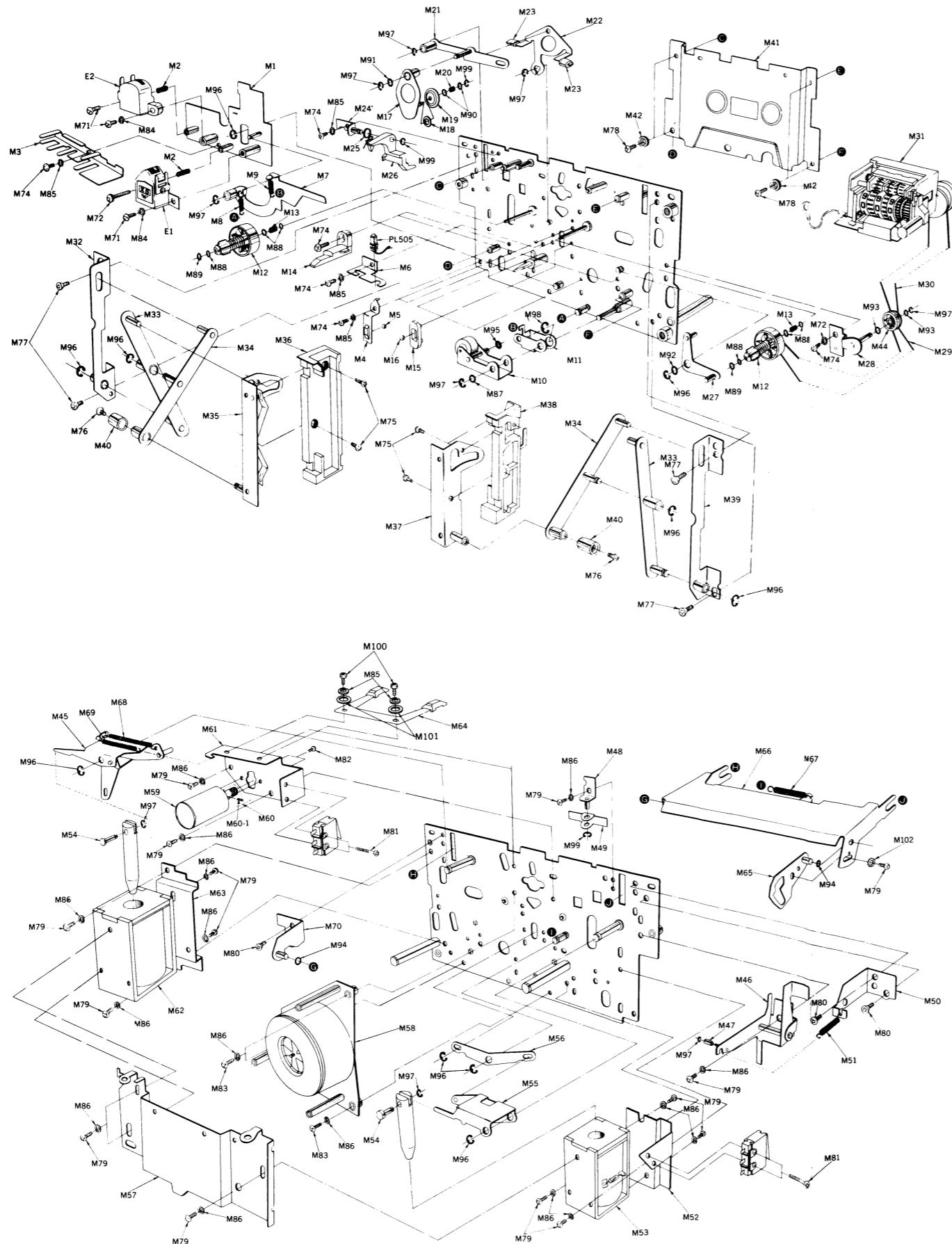
ELECTRICAL PARTS LOCATION



NOTE: Δ indicates that only parts specified by the manufacturer be used for safety.

| Ref. No. | Part No. | Part Name & Description |
|--|------------------|--------------------------------|
| ELECTRICAL PARTS | | |
| E1 | WY1402BZ | Record/Playback Head |
| E2 | QWY213Z | Erase Head |
| E3 | QSLS002RF | Fluorescent Level Meter |
| E4 | QFC1204M | AC Power Cord |
| *For All European areas except United Kingdom. | | |
| | QFC1205M | " |
| *For United Kingdom. | | |
| E5 | QJA024H | Headphones Jack |
| E6 | QJA044H | Microphone Jack |
| E7 | QJP1921TN | 3 Pin Post |
| E8 | QJP1922TN | 6 Pin Post |
| E9 | QJP1923TN | 9 Pin Post |
| E10 | QJP1924TN | 12 Pin Post |
| E11 | QJS1921TN | 3 Pin Socket |
| E12 | QJS1922TN | 6 Pin Socket |
| E13 | QJS1923TNL | 9 Pin Socket |
| E14 | QJS1924TNL | 12 Pin Socket |
| E15 | QJT1053 | Contact-A |
| E16 | QJT1054 | Contact-B |
| E17 | QTW1118 | Spark Killer Cover |
| E18 | Δ QBJ1425 | AC Cord Bushing |
| E19 | QTD1164 | AC Cord Clamper |
| E20 | Δ QTF1039 | Fuse Holder |
| E21 | QTF1054 | Fuse Holding Terminal |
| E22 | QTD1244XN | Wire Clamper-S |
| E23 | QTD1250XN | Wire Clamper-L |
| E24 | QJT4017 | 4 Pin Terminal |
| E25 | QTH1088 | Heat Sink |
| E26 | QMF1980 | " |
| E27 | QTH1136 | " |
| E28 | QTH1118 | " |
| E29 | QTS1423 | Shield Plate |
| E31 | QXR0385 | "Black Type" |
| | QXR0424 | "Silver Type" |
| E32 | QXA0661 | Record/Playback Angle Assembly |
| E33 | QBS1116 | Record/Playback Rod |
| E34 | QML3283 | Record/Playback Lever |
| E35 | QME0141 | Record Plunger |
| E36 | XSN26+8 | Screw $\oplus 2.6 \times 8$ |
| E37 | QML3281 | Record Lever |
| E38 | XWC26 | Lock Washer |
| E39 | QMN2095 | Plunger Pin |
| E40 | QMA3300 | Jack Angle |
| E41 | QMA3297 | Power Switch Angle |
| E42 | QKJ0242 | Cap |
| E43 | XUC25FT | Stop Ring 2.5φ |
| E44 | XUC3FT | Stop Ring 3φ |
| E45 | QZE0012 | |
| E46 | QJT1040 | 接触 (Contact) |
| E47 | QMA3404 | 保险丝角度 (Fuse Angle) |
| E48 | QJT1067 | Post |
| E49 | QJT0015 | Lug Terminal |
| E50 | QJS1923TN | 9 Pin Housing |
| E51 | QJS1924TN | 12 Pin Housing |
| E52 | QMA3296A | Transformer Angle |

EXPLODED VIEWS



| Ref. No. | Part No. | Part Name & Description | Ref. No. | Part No. | Part Name & Description |
|-------------------------|---------------|--------------------------------|----------|-----------|----------------------------|
| MECHANICAL PARTS | | | | | |
| M1 | QXK2029 | Head Base Plate Assembly | M60-1 | XXE26D3FZ | Set Screw |
| M2 | QBCA0008 | Head Spring | M61 | QMA3313 | Motor Angle |
| M3 | QTD1261 | Head Wires Clamper | M62 | QXE0243 | Plunger |
| M4 | QBP1733 | Steel Ball Holder-A | M63 | QMA3312 | Plunger Angle-R |
| M5 | QDK1012 | Steel Ball 2.5φ | M64 | QXH0276 | Cassette Holding Cushion |
| M6 | QMA3321 | Lamp Angle | M65 | QXL1173 | Lock Lever Assembly |
| M7 | QXL1168 | Pressure Roller Lever Assembly | M66 | QML3282 | Connector Lever |
| M8 | QBT1490 | Eject Lever Spring | M67 | QBT1553 | Holder Spring-R |
| M9 | QBT1441 | Pressure Roller Spring | M68 | QBT1405 | Lever Spring |
| M10 | QXL1166 | Pressure Roller Assembly | M69 | QBT1713 | Record Spring |
| M11 | QML3267 | | M70 | QXA0702 | Connector Angle-R Assembly |
| M12 | QXD0087 | | M71 | XSN2+6 | Screw ②×26 |
| M13 | QBC1272 | | M72 | QHQ1211 | Head Adjustment Screw |
| M14 | QMG0054 | | M74 | XSN2+4 | Screw ②.6×4 |
| M15 | QMH2009 | | M75 | XSN2+4BV | Screw ②.6×4 |
| M16 | QDK1006 | | M76 | XSS2+4 | Screw ②×4 |
| M17 | QXL1189 | | M77 | XSS3+4S | Screw ③×4 |
| M18 | QBF1260 | | M78 | QHQ1185 | Step Screw |
| M19 | QXI0101 | | M79 | XSN3+5S | Screw ③×5 |
| M20 | QBC1308 | | M80 | XSS3+6S | Screw ③×6 |
| M21 | QXL1164 | | M81 | QHQ1182 | Step Screw |
| M22 | QML3273 | | M82 | XSN2+3 | Screw ②×3 |
| M23 | QBG1132 | | M83 | XSN3+8S | Screw ③×8 |
| M24 | QXA0714 | | M84 | XWA2B | Spring Washer 2φ |
| M25 | QBN1573 | | M85 | XWA26B | Spring Washer 2.6φ |
| M26 | QML3285 | | M86 | XWA3B | Spring Washer 3φ |
| M27 | QXL1172 | | M87 | QBW2016 | Poly Washer |
| M28 | QXA0712 | | M88 | QBW2012 | " |
| M29 | QDB0218 | | M89 | QBW2008 | " |
| M30 | QDB0234 | | M90 | QBW2015 | " |
| M31 | QXC0021 | Tape Counter Assembly | M91 | QBW2017 | " |
| | "Black Type" | | M92 | QBW2018 | " |
| | "Silver Type" | | M93 | QBW2016 | " |
| M32 | QXA0703 | " | M94 | QBW2019 | " |
| M33 | QXL1191 | Angle-L Assembly | M95 | QBK7123 | Fiber Washer |
| M34 | QXL1190 | Link Lever-A Assembly | M96 | XUC3FT | Stop Ring 3φ |
| M35 | QXA0706 | Link Lever-B Assembly | M97 | XUC25FT | Stop Ring 2.5φ |
| M36 | QMH2027 | Holder Angle-L Assembly | M98 | XUC5FT | Stop Ring 5φ |
| M37 | QXA0705 | Cassette Holder-L | M99 | XUC2FT | Stop Ring 2φ |
| M38 | QMH2028 | Holder Angle-R Assembly | M100 | XSN2+6 | Screw ②.6×6 |
| M39 | QXA0704 | Cassette Holder-R | M101 | XWG26 | Flat Washer |
| M40 | QJK0245 | Angle-R Assembly | M102 | XWC3B | Lock Washer |
| M41 | QXH0286 | Spacer-A | | | |
| M42 | QMZ1213 | Mechanism Cover | | | |
| M43 | QBP1135 | Spacer-B | | | |
| M44 | QDP1753 | Spring Washer | | | |
| M45 | QXL1165 | Connection Pulley | | | |
| M46 | QXL1188 | Lever-B Assembly | | | |
| M47 | QDP1758 | Eject Lever Assembly | | | |
| M48 | QXA0713 | Roller | | | |
| M49 | QML3284 | Angle Assembly | | | |
| M50 | QMA3314 | Release Lever | | | |
| M51 | QBT1753 | Connector Angle | | | |
| M52 | QMA3311 | Playback Lever Spring | | | |
| M53 | QME0141 | Plunger Angle-L | | | |
| M54 | QMN2095 | Plunger | | | |
| M55 | QXL1171 | Plunger Pin | | | |
| M56 | QML3276 | Plunger Lever Assembly | | | |
| M57 | QMA3322 | Plunger Lever | | | |
| M58 | QXK2010 | Reinforcement Angle | | | |
| M59 | MKCN22AE5 | Capstan Motor Assembly | | | |
| M60 | QXP0574 | Reel Motor | | | |
| | | Motor Pulley Assembly | | | |

SPECIFICATIONS

| | |
|---|---------------------------|
| Pressure of pressure roller | 400±30 gr |
| Wow and flutter: JIS (Test tape QZZCWAT) | Less than 0.04% (WRMS) |